NATIONAL INSTITUTE OF MENTAL HEALTH

LATINO MENTAL HEALTH:

CURRENT RESEARCH AND POLICY PERSPECTIVES

EDITORS:

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This monograph is comprised of papers resulting from research planning workshops on "Mental Disorders in Hispanic Populations" sponsored by the National Institute of Mental Health (N.I.M.H.). This document was prepared under contract number 94MF04837-24D from the N.I.M.H. to the Neuropsychiatric Institute, University of California, Los Angeles (Cynthia Telles, Ph.D., Principal Investigator). Juan Ramos, Ph.D., Associate Director of Prevention, served as the N.I.M.H. Project Officer.

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Preface

The necessity of defining a comprehensive Latino mental health research agenda, which can inform public policy, program planning and health care reform, has been articulated repeatedly by experts in the field. In an effort to address this need, the National Institute of Mental Health funded a series of workshops on "Mental Disorders among Hispanic Populations" between April, 1990 and February, 1994. The general intent of the meetings was to audit recent and ongoing research on epidemiology, assessment, treatment and prevention of mental disorders; to discuss policy implications; and to identify salient gaps in knowledge and propose related research.

In order to begin the process, we brought together a group of leading researchers and policy makers from throughout the United States to report on the "state of the art" in specific areas of Latino mental health research and to formulate recommendations. This monograph is a collection of selected reports that were prepared by these experts. Although these chapters do not comprise an exhaustive review of the literature or reflect a full spectrum of investigations, they represent some of the most significant recent research efforts and related commentary in this field.

Part One is devoted to the psychiatric epidemiology of mental disorders and distress among Latino populations. Karno introduces this section with a review of early literature and a report on the most important prevalence data to date on diagnosable mental disorders among Mexican Americans. Roberts reviews the limited epidemiologic data on mental disorders among Hispanic origin children and adolescents and reports preliminary data from a National Institute of Drug Abuse sponsored study of youth, which provides important evidence regarding gender and ethnicity as risk factors for self-reported symptoms of psychological distress. Most importantly, he provides a carefully thought out research strategy for future epidemiologic studies of the etiology and outcome of mental disorders among youth of Mexican origin.

Vega and his colleagues describe an exciting, prospective, large-scale, longitudinal study in Dade County, Florida, which was designed to assess the complex relationships between cultural adapta-

tion and the experience of psychosocial distress, including symptoms of behavioral, mental and substance use disorder among early adolescents. This methodologic and conceptual overview of their own early study and those of others in this area emphasizes the value of empirically derived assessment tools for the epidemiologic study of adolescent well-being in different cultural settings.

Telles reports on the relationships between psychiatric symptoms and disorder on the one hand, and the factors of immigration and socioeconomic status among Hispanics on the other. She cites important discrepancies between earlier studies that relied on symptom scales that measure distress levels and the ECA study that assessed DSM-III defined mental disorders. Her discussion of the epidemiologic data underscores the role of socioeconomic status, immigrant status and level of acculturation as very significant and distinctive influences upon vulnerabilities to mental disorder and distress.

Canino reviews the significant epidemiologic studies of psychiatric disorder and symptomatology among mainland and island Puerto Ricans over the past decade and compares the findings with those from similar studies among other ethnic groups. She concludes her overview with some specific measures to improve cultural sensitivity and relevance in future epidemiologic studies among Hispanic and other cultures.

Briones and colleagues report on a community study of over 800 residents of El Paso, Texas regarding the relative influences of Anglo versus Mexican-American ethnicity and socioeconomic status upon the risk of depressive and anxiety symptoms. The importance of socioeconomic status and the even greater importance of more specific life stressors in predicting symptoms levels leads them to strongly recommend a multifactorial approach to both epidemiologic research and clinical practice among Mexican American and other ethnic groups.

Part Two focuses on the assessment of mental disorders among Latinos. Lopez reviews the literature regarding the role of cultural factors in the expression of psychopathology. He makes a strong case for the inclusion of direct measures of culture in empirical studies of Latinos and discusses implications for assessment and clinical practice. Marcos reviews research regarding the adverse effects of the language barrier on the assessment of psychopathology. He discusses specific dimensions of the psychiatric examination which are strongly influenced by limitations in language proficiency. Mezzich examines issues pertinent to the diagnoses and assessment of

Hispanics and, more specifically, discusses strategies for enhancing the cultural sensitivity of the DSM-IV diagnostic system.

Fabrega eloquently critiques current Hispanic mental health research for its excessive reliance on "Establishment Psychiatry" conceptual frameworks and diagnostic instruments. He argues that the concept of Hispanic culture has not been adequately considered and integrated into appropriate models of assessment and treatment. He offers recommendations for a culturally sensitive research agenda.

Part Three focuses on prevention and treatment of mental disorders among Latinos. Munoz presents compelling data to document the need for large scale, culturally and linguistically appropriate preventive interventions to address the growing mental health needs of Hispanic populations. He offers specific suggestions for the implementation of such programs. Vega and his associates describe the results of a large scale, community based preventive intervention research project for women of Mexican descent. Their thoughtful discussion of the design and implementation of a culturally sensitive prevention program, as well as the limitations of such an effort, provides important insight with implications for future research and practice.

Martinez reviews the treatment research literature pertaining to Latinos, highlighting the important efforts, for example, of Szapocznik within Cubans and of Constantino and Comas-Diaz with Puerto Ricans. He discusses the research challenge of defining and investigating culturally sensitive treatment modalities.

In the final section of this monograph, public mental health administrators provide important commentary on the need for future research efforts to more directly inform public policy and program planning. Floyd Martinez challenges the research community to redirect its efforts and focus on more relevant and critical issues currently affecting the management and delivery of mental health care for Latinos. Padilla describes a system-wide effort in a public mental health department to provide culturally appropriate services to Latinos; in this context, she makes the case for more research with practical application to the public sector.

Our hope is that these initial efforts and recommendations will provide the impetus for the development of a comprehensive and coordinated Latino mental health research agenda. As proposed by the experts, this agenda should include the future study of the epidemiology of mental disorders and distress, especially among children; optimal strategies for defining, assessing and diagnosing

mental disorders; effective and culturally competent treatment modalities and preventive interventions; and demonstration projects that evaluate and improve the accessibility, delivery and quality of treatment.

The dramatic underutilization of health and mental health services by Latino populations and the failure of the existing health care delivery systems to provide sufficient and appropriate services have been documented extensively by major federally funded investigations, including the Epidemiologic Catchment Area Program and the Hispanic Health and Nutritional Examination Survey. The development of an adequate knowledge base in areas such as prevalence, risk factors, high risk groups, barriers to utilization, appropriateness of care and cost-effectiveness of interventions, for example, is critical, especially at this time of substantial reorganization of the structure, management and financing of national and local health and mental health care systems. Existing research findings should be analyzed, and a future research agenda should be developed to guide the design of health care reform programs and managed care systems that are responsive and responsible. In fact, it is essential that standards of care and conditions of participation for providers of mental health services to Latinos include the necessary cultural and linguistic components to ensure accessibility and quality of care, as importantly as strategies for cost containment.

We wish to express our deepest appreciation to Dr. Juan Ramos, Associate Director, National Institute of Mental Health, not only for his assistance with this monograph, but most importantly for his invaluable support, guidance and advocacy on behalf of Latino mental health research. It would be almost impossible to identify a leading figure in this field who has not benefitted, directly or indirectly, from his tireless efforts over the course of almost three decades. Lastly, the secretarial and administrative assistance of Lina Alvarez and Nancy Smith is very much appreciated.

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Part I

Psychiatric Epidemiology of Mental Disorders and Distress

1

The Prevalence of Mental Disorder Among Persons of Mexican Birth or Origin

Marvin Karno, M.D.

History

In the late 1950s, the first major report on the prevalence of mental disorders among a U.S. Hispanic population, viz., Mexican-Americans in Texas, disclosed a paradox. The findings of Jaco (1959) that Mexican-Americans in Texas had lower rates of treated mental disorder than did Anglo-Americans was paradoxical in light of the seminal report by Hollingshead et al. (1958) that rates of treated mental disorder varied inversely with socioeconomic status (SES). The low rate of disorder reported for Mexican-Americans in Texas was puzzling in view of the fact that SES levels among the Mexican-American population in Texas were substantially lower than among the Anglo-American population. Jaco's interpretation that this rate of treated illness reflected a true (and impressively low) community rate among this population was based on his observations of strong extended kin, social and emotional support, resources within Mexican-American communities which he regarded as a factor protective against the development of mental disorders.

Fabrega et al. (1968) reported a decade later from Texas that less acculturated Mexican-American patients seen in a public outpatient clinic displayed more severe symptoms of psychopathology compared to both more acculturated Mexican-Americans and Anglo-Americans. The conclusion was tentatively drawn that high levels of family tolerance and support caused longer delays in the seeking of professional care, thus engendering higher levels of psychopathology by the time of first professional contact.

This very different interpretation that the Mexican-American family's support function served to contain mental disorder within the family environment rather than prevent mental disorder was further strengthened by a California study in the 1960s. Karno and Edgerton (1969) confirmed that Mexican-Americans were dramatically under-represented in proportion to their population numbers, in

both outpatient and inpatient public sector treatment programs in California and other southwestern states. They carried out a bilingual community survey of 444 Mexican-Americans and 224 Anglo-Americans household residents in East Los Angeles to determine cultural differences in perceptions and definition of and attitudes toward mental disorder that might shed light on the paradox of under-representation in mental health facilities. Their findings suggested that, rather than cultural differences, the primary reasons for the low prevalence of treated mental disorder in the Mexican-American community of East Los Angeles were: (1) the lack of available, affordable mental health resources; (2) the barrier of language; (3) and the strong reliance upon family physicians as the front-line mental health resource.

Such evidence as that provided by Fabrega and colleagues, Karno and Edgerton, and others, however, was indirect only. It was with the advent of both an operational diagnostic system (DSM-Ill, DSM-III-R) that it became possible to plan and carry out the direct measurement of the prevalence of various mental disorders and reported roles of utilization of mental health services in both Euro-American and ethnic minority communities in the United States. The impetus for such an investigation was provided in 1978 by the Report of the President's Commission on Mental Health (Report, 1978), which included a major recommendation for a large-scale community epidemiologic study of mental disorders as a first step in the rational planning for mental health, services throughout the United States.

The Epidemiologic Catchment Area Program

In response to the President's Commission, the National Institute of Mental Health, in collaboration with five major universities, sponsored the Epidemiologic Catchment Area (ECA) project, which during the past decade has provided an extraordinarily rich psychiatric data base on over 18,500 randomly selected adult household respondents and over 2,000 institutionalized adult respondents residing in five U.S. communities. The first four ECA sites (New Haven, Baltimore, St. Louis, and the Piedmont area of North Carolina) were communities that included adequate numbers of Black, elderly and rural subjects required by the design of the study. A fifth (and final) site was required to provide the opportunity to assess the prevalence and incidence of selected, DSM-III-defined mental disorders and the utilization of treatment resources by a substantial community of Mexican-American respondents. Los Angeles and the UCLA

Department of Psychiatry and Biobehavioral Sciences were selected in 1980 for this specific epidemiologic task. The importance of this decision was represented by 1980 census data indicating that the U.S. Hispanic population numbered 14.6 million, about 60% of whom were of Mexican origin or birth (Department of the Census, 1981). The largest concentration of Mexican-Americans resided in the greater Los Angeles Area.

The methods and results of the entire five-site ECA study are reported in detail in two monographs (Eaton & Kessler, 1985; Robins & Regier 1991). These are far more convenient and accessible than are the hundreds of individual research reports from the ECA study scattered throughout various journals over the past 10 years.

The Los Angeles site of the ECA study (LAECA) comprised two NIMH-defined Catchment Areas; one in East Los Angeles was predominantly (83%) Hispanic, and the other, at the west end of the city adjacent to the Pacific coast, including the communities of Venice and Culver City, was only 21% Hispanic. The two catchment areas selected were chosen for the mirror-image proportions of Hispanic non-Hispanic population, their near identical total populations, and the presence in each of a strong, well established, comprehensive Community Mental Health Center. These Centers contracted with the LAECA site team to assist with assuring community entre, the provision of sites for the testing and refining of bilingual instruments and the recruitment of highly motivated interviewers for the study.

A two-stage probability sampling design, using census blocks as primary sampling units and households as secondary units, resulted in the random selection of 3,125 household respondents from the two LAECA catchment areas. The NIMH-sponsored Diagnostic Interview Schedule (DIS) (Robins et al., 1981; Robins et al., 1982; Helzer et al., 1985), was administered in face-to-face interviews with 1,243 Mexican-American and 1,309 non-Hispanic white respondents. The balance of 573 respondents (18% of the sample) were of diverse national and ethnic backgrounds and data concerning them will not be reported here except in summary presentations of the entire LAECA sample in which they are subsumed. Of the total number of Hispanic-Americans interviewed, 87% were of Mexican birth or origin.

A preliminary substantial task of the LAECA site team was the creation and testing of a Spanish-language version of the DIS. This work demonstrating essential equivalence of the English and Spanish

versions is reported elsewhere (Burnam et al., 1983; Karno et al., 1983). The importance of this work is later demonstrated by the fact that among Mexican-American respondents, 47% completed the interview in Spanish.

Three areas of special interest, in addition to basic prevalence and incidence data, were emphasized in the LAECA study. The richly complex processes of adaptation to a new culture and a new nation have been a particular focus of scholars and investigators concerned with the health and mental health of the U.S. Hispanic origin population. The LAECA site team constructed a 26-item Acculturation Scale, based substantially on earlier efforts by Cuellar et al. (1980), Szapocznik et al. (1978). The reliability and construct validity of the scale are reported elsewhere (Burnam et al., 1987), as is the relationship of acculturation to the lifetime prevalence of mental disorder among LAECA Mexican-American household respondents (Burnam et al., 1987). A brief review of the significant findings on the relationships discovered between acculturation, migration and rates of mental disorder will be presented in this report.

The LAECA site team received supplemental funding from the National Center for the Prevention and Control of Rape to collaboratively develop and include in the survey questionnaire a series of questions pertaining to the respondent's lifetime experience with sexual assault, either as child or adult. Some of the results of that supplemental study reported elsewhere (Burnam et al., 1988; Golding et al., 1988; Golding et al., 1989; Siegel et al., 1987; Siegel et al., 1989; Sorenson et al., 1987) will be briefly presented in this overview chapter.

A final major emphasis of the national ECA study was to assess the use of a wide range of health-related services by all respondents, in order to assist in the rational planning of mental health care. The three sectors of care which were inquired after by detailed questions in the core interview at each site were as follows: (1) specialty mental health services, (2) general medical resources, and (3) other human service resources. The latter included clergy, social and family service agencies, spiritualists, and others. Given the paradox disclosed by the work of Jaco over thirty years ago which was cited at the beginning of this chapter, the issue of utilization of services was considered to be of special importance at the LAECA site.

There was at last the opportunity to determine if Mexican-Americans did or did not use mental health services proportional to the non-Hispanic white community. Some of the data from reports

(Hough et al., 1987; Wells et al., 1987; Wells et al., 1988; Wells et al., 1989) on this aspect of the LAECA project will also be briefly summarized.

Results From The LAECA Study

Lifetime Prevalence Rates

Table 1 reveals that the overall rate for any DIS disorder is almost identical for non-Hispanic whites, Mexican-Americans, and the total

Table 1. Lifetime Prevalence of DIS/DSM-III Disorders*

	LOS ANGELES		
	Non-Hispanic Whites (N = 1243)	Mexican Americans (N = 1309)	Total Persons (N = 3125)
Substance Use Disorders	22.0 (1.2)	18.4 (1.2)	18.5 (0.7)
Alcohol Use/Dependence	14.8 (1.1)	17.3 (1.2)	14.9 (0.7)
Drug Abuse/Dependence	13.2 (0.9)	3.7 (0.4)	7.3 (0.5)
Schizophrenia/iform	0.9 (0.3)	0.5 (0.2)	0.7 (0.2)
Schizophrenia	0.8 (0.3)	0.4 (0.2)	0.6 (0.2)
Schizophreniform	0.1 (0.1)	0.1 (0.1)	0.1 (0.0)
Affective Disorders	11.0 (1.6)	7.8 (0.9)	8.9 (0.6)
Manic Episode	1.0 (0.3)	0.3 (0.2)	0.5 (0.1)
Major Depressive Episode	8.4 (0.8)	4.9 (0.7)	6.4 (0.5)
Dysthymia	4.1 (0.6)	4.8 (0.8)	4.2 (0.4)
Anxiety Disorder	13.6 (1.2)	14.5 (1.1)	13.5 (0.7)
Phobia	10.7 (1.0)	13.5 (1.2)	11.7 (0.6)
Panic Disorder	1.8 (0.4)	1.2 (0.3)	1.5 (0.3)
Obsessive-Compulsive Disorder	3.0 (0.5)	1.8 (0.4)	2.1 (0.3)
Antisocial Personality Disorders	3.0 (0.5)	3.6 (0.5)	2.9 (0.3)
Any DIS Disorder†	35.2 (1.7)	34.6 (1.4)	33.2 (1.0)

DIS indicates Diagnostic Interview Schedule; ECA, Epidemiologic Catchment Area. Numbers in Parentheses are standard errors.

†Includes cognitive impairment, anorexia nervosa and somatization disorder.

Adapted from Karno M, Hough RL, Burnam MA, et al. Lifetime prevalence of specified psychiatric disorders among Mexican Americans and non-Hispanic Whites in Los Angeles. *Arch Gen Psychiatry* 1987; 44:696.

*Taken from: Gaviria M, Arana JD, eds. Health and behavior: Research agenda for Hispanics. *The Simon Bolivar Research Monograph Series No. 1.* Chicago: University of Illinois Press, 1987. All material in this volume is in the public domain. The data is from investigations supported by NIMH-UCLA cooperative Agreement U01 MH 35865 and NIMH RSDA Award MH 00351.

LAECA sample. There are only two notable specific exceptions; drug abuse/dependence is more than three times as prevalent among non-Hispanic whites compared to Mexican-Americans, and major depressive disorder is also more prevalent among non-Hispanic whites. The high rate of drug abuse among non-Hispanic whites is among men and women, while the discrepancy in rates for major depression is due to the very high rate of the disorder afflicting non-Hispanic white women. Indeed, non-Hispanic white women between the ages of 18 and 39 reported a lifetime prevalence rate greater than 15% for major depression. This was two and a half times the rate for Mexican-American women of the same age range.

Detailed analyses of the LAECA lifetime rates are found in Karno et al. (1987), and six-month prevalence rates will be found in Burnam et al. (1987). The lifetime rates for any DIS disorder were generally comparable, at all five ECA sites, with somewhat higher rates at the Baltimore and North Carolina sites due to the unusually high rates of anxiety (particularly phobic) disorders reported from those two sites. The Los Angeles total rates for both non-Hispanic whites and Mexican-Americans were in about the mid-range compared to the other sites.

Acculturation and Immigrant Status

Eight major DIS-DSM-III disorders (major depression, dysthymia, phobia, obsessive compulsive disorder, panic disorder, alcohol abuse/dependence, drug abuse/dependence, and anti-social personality) were assessed according to levels of acculturation and country of birth, viz., U.S. or Mexico, among the Mexican- American respondents. Initial analyses revealed that native-born Mexican-Americans who were characterized by high levels of acculturation reported higher lifetime prevalence rates of major depression, dysthymia, phobia, alcohol abuse/dependence and drug abuse/dependence compared to immigrant Mexican-Americans. However, after controlling for country of birth and other demographic factors, only a single difference was found in those of high versus low acculturation. Immigrants characterized by high acculturation reported marginally more prevalent drug abuse/dependence than those of low acculturation. Among U.S.-born Mexican-Americans, level of acculturation was unrelated to the prevalence rate of any of the eight disorders examined.

Country of origin and ethnicity influenced the lifetime prevalence rate of three out of six DSM-III defined anxiety disorders. Simple

phobia was more prevalent among U.S.-born Mexican-Americans compared to immigrants and native non-Hispanic whites. U.S.-born Mexican-Americans also report higher rates of agoraphobia than immigrant Mexican-Americans. In regard to generalized anxiety disorder (not included in the DIS but independently included at the LAECA site), native-born non-Hispanic whites reported higher lifetime levels than either immigrant or native Mexican-Americans. Refer to Karno et al. (1987) for detailed analyses and discussion of anxiety disorders assessed by the LAECA site.

Sexual Assault

The basic question asked of all LAECA respondents concerning sexual assault was: "In your lifetime has anyone ever tried to pressure you or force you to have sexual contact? By sexual contact I mean their touching your sexual parts, your touching their sexual parts, or sexual intercourse?" Of the total LAECA sample (46% Hispanic, 42% non-Hispanic white, 47% male and 53% female), 5.3% reported sexual assault during childhood. Non-Hispanic whites reported higher rates than Hispanics (8.7% vs. 3.0%) and women reported higher rates than men (6.8% vs. 3.8%). Sexual assault during adult life, i.e., at or after age 16, was reported by 10.5% of the total sample.

Mexican-Americans reported less than half as much adult sexual as assault non-Hispanic whites (6.8% vs. 15.5%), and the highest rate (26.3%) was reported by non-Hispanic white women ages 18-39. The sources cited (Burnam et al., 1988; Golding et al., 1988; Golding et al., 1989; Siegel et al., 1987; Siegel et al., 1989; Sorenson et al., 1987) should be consulted for detailed analyses and discussion. Of relevance here is that childhood sexual assault was most often by an acquaintance, carried out by persuasion rather than threat or physical aggression, and usually occurred about the age of 10. In contrast, in reporting on their most recent adult sexual assault experiences, over half of the respondents who had been assaulted experienced harm or the threat of harm, despite the fact that in three quarters of the instances the victims were acquainted with their assaulters. A history of sexual assault was also found to predict the later onset of anxiety disorders, major depressive episodes, and alcohol or drug abuse or dependence. Childhood sexual assault was found to be more strongly predictive of these later mental disorders than was sexual assault experienced in adulthood (Burnam et al., 1988).

Utilization

The utilization of mental health services was the issue with which this chapter's historical review began, and it was also the issue which was the stimulus and focus of much of the research concerning Hispanic mental health in the United States in the 1960s and 1970s. Some basic LAECA utilization data is summarized in Table 2 and Table 3, respectively, although detailed additional data will be found in the sources cited (Hough et al., 1987; Wells et al., 1987; Wells et al., 1988; Wells et al., 1989).

The summary tabular data presented here indicates that Mexican-Americans with a DIS/DSM-III mental disorder within the six months prior to interview made significantly fewer visits to general health or mental health resources than did non-Hispanic whites. Los Angeles non-Hispanic white utilization rates are essentially the same as utilization rates at the other four ECA sites. This means that, as originally observed thirty years ago, the utilization of mental health services by Mexican-Americans is distinctively low.

Table 2. Utilization of Ambulatory Care*

	LOS ANGELES					
	Mexican Americans		Non-Hispanic Whites		Total Persons	
All Persons						
Health and/or mental health visits	39.4	(1.8)	58.0	(1.6)	48.1	(1.1)
Average number of visits per person	2.03	(0.2)	3.53	(0.2)	2.75	(0.2)
Persons with any Recent DIS/DSM-III Disorder						
Health and/or mental health visits	48.4	(4.2)	70.6	(3.7)	56.5	(2.5)
Average number of visits per person	3.10	(0.6)	6.61	(0.8)	4.49	(0.5)

Adapted from Hough RL, Landsverk JA, Karno M, et al. Utilization of health and mental health services by Los Angeles Mexican Americans and non-Hispanic Whites. *Arch Gen Psychiatry* 1987; 44:704.

*Taken from: Gaviria M, Arana JD, eds. Health and behavior: Research agenda for Hispanics. *The Simon Bolivar Research Monograph Series No. 1.* Chicago: University of Illinois Press, 1987. All material in this volume is in the public domain. The data is from investigations supported by NIMH-UCLA cooperative Agreement U01 MH 35865 and NIMH RSDA Award MH 00351.

Table 3. Percent with Mental Health Visits in Past Six Months by Type of Provider Seen and DIS/DSM-III Disorder Status*

	LOS ANGELES					
	Mexican Americans		Non-Hispanic Whites		Total Persons	
All Persons						
Mental health visits (total)	4.5	(0.7)	9.0	(0.7)	6.2	(0.5)
General medical provider only	2.0	(0.4)	1.9	(0.4)	1.9	(0.2)
Mental health specialist	2.4	(0.5)	7.0	(0.5)	4.4	(0.3)
Persons with recent DIS/DSM-III disorder						
Mental health visits (total)	11.1	(2.7)	21.6	(2.4)	14.4	(1.5)
General medical provider only	2.7	(1.2)	4.9	(1.0)	3.4	(0.7)
Mental health specialist	8.4	(2.0)	16.8	(2.1)	11.0	(1.3)
Persons with past DIS/DSM-III disorder						
Mental health visits (total)	4.4	(1.6)	10.1	(2.1)	7.2	(1.2)
General medical provider only	3.1	(1.5)	3.0	(1.5)	3.1	(1.0)
Mental health specialist	1.3	(0.5)	7.2	(1.6)	4.1	(0.8)
Persons with no lifetime DIS/DSM-III disorder						
Mental Health visits (total)	2.5	(0.5)	5.2	(0.8)	3.7	(0.5)
General medical provider only	1.6	(0.3)	0.8	(0.3)	1.2	(0.2)
Mental health specialist	0.9	(0.4)	4.4	(0.6)	2.6	(0.4)

Adapted from Hough RL, Landsverk JA, Karno M, et al. Utilization of health and mental health services by Los Angeles Mexican Americans and non-Hispanic Whites. *Arch Gen Psychiatry* 1987; 44:704.

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In contrast, Mexican-Americans with or without a current or past mental disorder made use of the general medical care sector to the same degree as non-Hispanic whites. Among LAECA respondents, non-Hispanic whites made use of the specialty mental health sector about five times as frequently as did Mexican-Americans. More detailed analyses revealed that less acculturated Mexican-Americans made less use of mental health care and general medical resources than did the more acculturated. Non-Hispanic whites with a recent

mental disorder were seven times as likely to use outpatient mental health services than similarly afflicted but less acculturated Mexican-Americans. Those respondents who had experienced sexual assault were more likely to consult medical providers and those assaulted during childhood were more frequent users of mental health care than those not so victimized.

Discussion

The prevalence of mental disorders and utilization of services reported by Mexican-Americans in two catchment areas in Los Angeles in the 1980s cannot be used as a basis for generalizing to the more than 20,000,000 persons of Hispanic birth or origin now residing in the U.S. The data presented here, however, does lend support to the belief that the major mental disorders defined in DSM-III (and refined in DSM-III-R) are, with the exceptions of substance abuse and possibly phobic disorders, distributed in the U.S. population rather evenly across major ethnic groups. This is consistent with the findings of the other four sites, which interviewed substantial numbers of African-Americans, that there were few differences in the prevalence rates of mental disorder among African-Americans compared with either non-Hispanic whites or LAECA site Mexican-American sample.

Although the low rate of utilization of mental health services by Mexican-Americans is consistent with earlier observations, the primary reason for it appears to be simply that of unavailability of such services to large sectors of the U.S. Hispanic origin population. Karno & Morales (1971) reported that a fully bilingual mental health service, located in the heart of a residential Mexican-American community, was very heavily utilized by Hispanic-Americans. The more frequent use of mental health services by more acculturated Mexican-Americans also suggests that such individuals may have greater access to mental health services and information about such services. There still are very few Spanish-speaking mental health professionals and, in recent years, fewer mental health services available at low cost in Spanish and in locations readily accessible to rapidly growing and still generally low-income, Hispanic origin communities in the United States.

Short of a national health care program that would provide low-cost mental health care to those at the lower socioeconomic levels, and care which is socioculturally informed and sensitive, it is difficult

Table 4. Standardized[a] and Unstandardized Rates of Major Depressive Episode. Hispanic HANES and NIMH Epidemiologic Catchment Area

Diagnosis (n)	Mexican Americans[a] (3555)	Cuban Americans (902)	Puerto Ricans (1343)	ECA Hispanics[b] (1308)	ECA 5-site Range[c] (17,264)
Lifetime	4.2	3.9	8.9	4.6	4.7–9.8
(Unstandardized)		(3.5)	(9.0)	(4.9)	(3.7–8.4)
Six-month	2.3	2.4	5.8	2.5	2.2–4.2
(Unstandardized)		(2.2)	(5.8)	(2.8)	(1.7–3.6)
One-month	1.8	1.4	4.8	2.1	1.5–3.2
(Unstandardized)		(1.5)	(4.9)	(2.4)	(1.5–2.6)

[a] The Mexican American population was used to directly standardize all other rates shown. Unstandardized rates appear in parentheses below standardized rates.
[b] Los Angeles only. Includes 1,243 Mexican Americans.
[c] New Haven, Baltimore, St. Louis, Piedmont (North Carolina) and Los Angeles Nonhispanic Whites.

*Adapted from Moscicki EK, Rae D, Regier DA, Locke BZ. The Hispanic health and nutrition examination survey: Depression among Mexican Americans, Cuban Americans, and Puerto Ricans. In: Gaviria M, Arana JD, eds. Health and behavior: Research agenda for Hispanics. *The Simon Bolivar Research Monograph Series No. 1.* Chicago: University of Illinois Press, 1987. All material in this volume is in the public domain. The data is from investigations supported by NIMH-UCLA cooperative Agreement U01 MH 35865 and NIMH RSDA Award MH 00351.

to envision significant progress in meeting the mental health needs of this nation's Hispanic population.

New Research

A major epidemiologic study of the prevalence of mental disorders among Hispanic children and youth is greatly needed. Such an undertaking would most profitably be carried out in conjunction within a multi-site collaborative structure like that of the ECA study. Such a study should target risk factors of special significance to Hispanic children and their families, such as refugee/immigrant life experience, exposure to urban gang activities, violence, and other conditions of poverty and discrimination. Such a study could provide important comparative data to that obtained on childhood mental disorders and stresses experienced by other minority populations at risk, both indigenous and recently immigrated. Culturally unique adaptive resources might be explored in ancillary family/community

informant interviews such a study would require. The nesting of ethnographic studies and biomedical measures within such future epidemiologic, multi-site studies would be of particular value.

Although expensive, the cost would be small compared to the price of our ignorance concerning the mental health requirements of what will soon be the nation's largest ethnic minority group, which is already per capita the most abundant in children and youth. The data to be derived from such a major investigation would be essential to the design of Hispanic mental health services for the beginning of the next century.

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2

Research on the Mental Health of Mexican Origin Children and Adolescents

Robert E. Roberts, Ph.D.

There are virtually no data on the mental health of Mexican origin children and adolescents. On the one hand, given the limited data available on the epidemiology of mental disorders in the Mexican origin population generally (Cervantes and Castro, 1985; Cuellar and Roberts, 1984), it should come as no surprise that there are few data on children and adolescents. On the other hand, given that children and adolescents make up a much larger proportion of the Mexican origin group compared to other groups, that this segment of the population is growing rapidly, and that the social circumstances of Mexican origin children are disadvantaged relative to other groups, it is surprising there are so few data.

As a consequence of the extreme paucity of data, the following discussion is developed in three parts. First, available research is reviewed in terms of what it can tell us regarding the psychological well-being of Mexican origin youth. Second, some initial results are presented from the first nationwide survey that has collected data on the mental health status of Black and Hispanic youth. Third, a case is made for further research on the mental health of Mexican origin youth and some alternate strategies for acquiring such data are outlined.

The Evidence

A recurring theme concerning this segment of American society is that of its uniqueness. There is consensus that the Mexican origin population represents from many perspectives a group that is socially, culturally, historically, demographically, and geographically unique (Cervantes & Castro, 1985; de la Garza, Bean, Bonjean, Romo, & Alvarez, 1985; Levine & Padilla, 1980; Martinez & Mendoza, 1984; Ramirez, 1983; Vega & Miranda, 1985). Such a population is inherently intriguing to an epidemiologist since it implies

that there may be unique aspects to such a population's illness experience as well.

A decade ago there were almost no epidemiologic data available on mental disorders among people of Mexican origin. This situation has changed dramatically, particularly in the past several years. Studies have been carried out in Los Angeles (Burnam, Hough, Escobar, Karno, Timbers, Telles, & Locke, 1987; Frerichs, Aneshensel & Clark, 1981; Karno, Hough, Burnam, Escobar, Timbers, Santana, & Boyd, 1987), Alameda County (Roberts and Vernon, 1984), the central valley of California (Vega, Warheit, Buhl-Auth, & Meinhardt, 1984), El Paso, Texas (Burnam, Timbers & Hough, 1984), and San Antonio, Texas (Markides, Martin and Sizemore, 1980). In addition, two national surveys have been conducted (Moscicki, Rae, Regier, & Locke, 1987; Ortiz & Arce, 1984). Two general conclusions emerge from this still admittedly small knowledge base. First, the prevalence of both demoralization and clinical psychiatric disorders among persons of Mexican origin is of the same general magnitude as has been reported for other populations. Second, although the crude prevalence rates for some disorders in the Mexican origin population are higher than for other groups, statistical adjustment for differences in demographic and socioeconomic composition among the different ethnic groups usually eliminates the initial differentials observed. Thus far, there seems to be little evidence that there is anything remarkable about the mental health of this population in terms of the prevalence of mental disorders. If anything, one is struck by the similarities rather than the disparities between Mexican origin and other populations in terms of prevalence data. Thus far, there are no incidence data available on the Mexican origin population (and few for other U.S. populations).

The studies just reviewed were all on adults. What about studies of children and adolescents? Epidemiologic data on mental disorders among Mexican origin children and adolescents are virtually nonexistent. A systematic search yielded not a single published report of community-based incidence or prevalence data on mental disorders in this population. Indeed there have been few studies that have focused on the psychological well-being of Mexican origin youth, period.

For example, Diaz-Guerrero (1976) compared Mexican origin children and non-Hispanic children on the Test-Anxiety Scale (TASC) and from the AX variable of the Holtzman Inkblot Test (HIT) and reported that while Mexican origin children exhibited more test

anxiety, non-Hispanic children exhibited more underlying symbolic anxiety. Tuddenham, Brooks, and Milkovich (1974) compared 9-, 10-, and 11-year old children of Anglo, Black, Oriental, and Mexican origin whose mothers rated their behavior on a 100-item behavior inventory. The results were difficult to summarize, but in general, Mexican origin mothers described their children as more tense and their sons as overly generous.

O'Donnell, Stein, Machabanski, and Cress (1982) compared Mexican origin and Anglo children aged 3-5 years on a modified Behavior Problem Checklist (BPCL), and found that Anglo children had more anxiety-withdrawal symptoms than their Mexican origin counterparts. In an earlier study, Touliatos and Lindholm (1976) compared Anglo and Mexican origin children in grades K-5 on the BPCL. Teachers rated the Anglo children as having more problems in three areas: conduct disorder, inadequacy-immaturity, socialized delinquency; however, not for personality disorders. Argulewicz and Miller (1984) administered the Revised Children's Manifest Anxiety Scale and the Child Anxiety Scale to 719 Anglo, Black and Mexican origin students in grades 1-3. Although their focus was methodological, the authors did report mean scores for the three groups. Blacks scored lower than the other two groups, but overall there was little difference in scores between the Anglo and Mexican origin groups. Helsel and Matson (1984) examined the Child Depression Inventory in a sample of Anglo, Black and Hispanic youth 4-18 years of age. Older subjects manifested more symptomatology, but there was no effect for either gender or ethnic status.

These studies obviously are extremely limited in scope and provide no information concerning the burden (in terms of incidence and prevalence) of mental disorder among Mexican origin youth in either absolute terms or relative to other groups such as Anglos or Blacks.

In fact, to my knowledge, the results of only two studies have been published to date in the United States which have as their focus mental disorders among Hispanic youth. Bird, Canino, Rubio-Stipec, Gould, Ribera, et al. (1988) assessed psychopathology using the Child Behavior Checklist (CBCL), and the Diagnostic Interview Schedule for Children (DISC), in a sample of 777 children and adolescents aged 4-16 years of age living in Puerto Rico. Based on their results, they estimated that the six-month prevalence of DSM-III disorders was 17.9 or 16 percent, depending on severity. The six-month prevalence of some of the more common disorders ranged

from 4.9 percent for oppositional disorders to 2.8 percent for depression/dysthymia to 1.3 percent for simple phobias. The six-month prevalence of depression is comparable to rates reported for adults (Roberts, 1988).

Weinberg and Emslie (1987) completed a school-based survey of 3,294 high school students in the Dallas metropolitan area, using the Beck Depression Inventory (BDI) and the Weinberg Screening Affective Scale (WSAS). The sample contained 1,825 Black (55.4 percent), 783 Anglo (23.8 percent), and 598 (18.2 percent) Hispanic adolescents. On the BDI, 22.6 percent scored as mildly depressed (scores of 10-15) and 18.1 percent as moderately to severely depressed. Hispanic females scored the highest proportion with moderate to severe depression (31.2 percent); Anglo males the lowest (8.6 percent). Using the Weinberg criteria, 13.4 percent were depressed with Hispanic females most depressed (22.4 percent) and Anglo males least depressed (7.9 percent). It is assumed the overwhelming majority of the Hispanics were of Mexican origin.

A third study, not yet published, provides some additional information (albeit indirectly) about the mental health of Mexican origin adolescents. Swanson and colleagues (Swanson, Linsky, Quintero-Salinas, Pumariega, & Holzer, 1989) conducted a school-based survey in grades 7-12 in three cities in the Rio Grande Valley of Texas, using the CES-D scale. Ethnic identifiers were omitted from the questionnaire, but school records indicate over 95 percent of the students were Mexican origin. Using the standard "caseness" criterion of a score equal to or greater than 16, 48.1 percent of the sample of 1,775 were depressed, 40.9 percent of the males and 53.7 percent of the females. Using the more stringent criteria of scores of 21+ and 31+, 33.9 and 15.0 percent, respectively of the sample were depressed.

A fourth study, also not yet published, provides national data on depressive symptomatology among Anglo, Black, and Hispanic youth, including those of Mexican origin. What I would like to do now is present some data from this study. These data are some of the first reported from this particular survey.

The 1985 NIDA Survey

The data to be presented are taken from the 1985 National Household Survey on Drug Use, the eighth in a series of national surveys to measure the prevalence of drug use in the American household population aged 12 and over, conducted by the National Institute on Drug Abuse (NIDA). Essentially the same methodology has been

used in each of the surveys. Respondents are interviewed in person in their homes by trained interviewers using self-administered answer sheets and other methodology intended to maximize the validity of responses to sensitive questions. The data are kept confidential and anonymous. The respondents are drawn randomly within age categories from a national multistage, area probability sample of households in the coterminous United States. The household population includes more than 98 percent of the U.S. population.

For the 1985 NIDA Survey, the data were collected from June through December 1985 resulting in a total of 8,038 interviews and an overall response rate of 83 percent. In 1985, as in previous surveys, the younger age groups were oversampled in order to obtain more stable estimates of drug use for them. For the first time, in 1985, Black and Hispanics also were oversampled. Based on respondent self-classification, race/ethnicity groups were classified as: (1) Hispanic in origin, regardless of race; (2) White, not of Hispanic origin; and (3) Black, not of Hispanic origin.

Composition of the 1985 NIDA Survey sample, in terms of age and ethnic status is summarized in Table 1. As can be seen, roughly one-fourth of the overall sample falls into each of four age groups: 12-17, 18-25, 26-35, and 35 and older. Of the 8,038 respondents, 3,949 were Anglo (49.1 percent), 1,996 were Hispanic (24.8 percent), and 1,945 were Black (24.2 percent). Data on subjects 12-17 years of age are found in Table 2. The questionnaire and answer sheets were translated into Spanish, and respondents were given the option of being interviewed in English or Spanish.

Table 1. Distribution of 1985 NIDA Sample by Age and Ethnic Status

		Ethnic Status			
Age Group		Whites	Hispanics	Blacks	Total
12–17	No	1,007	642	601	2,250
	%	25.5	32.2	30.9	28.5
18–25	No	791	525	459	1,775
	%	20.0	26.3	23.6	22.5
26–34	No	1,075	527	494	2,096
	%	27.2	26.4	25.4	26.6
35+	No	1,076	302	391	1,769
	%	27.3	15.1	20.1	22.4
Total		3,949	1,996	1,945	7,890
		100.0	100.0	100.0	100.0

Table 2. Ethnic X Gender Composition of the 12–17 Age Group, 1985 NIDA Survey

	Gender					
	Male		Female		Total	
Ethnic Group	N	%	N	%	N	%
Anglo	523	47.2	470	42.9	993	45.1
Black	271	24.4	319	29.1	590	26.8
Mexican Origin	197	17.8	197	18.0	394	17.9
Other Hispanic	117	10.6	109	10.0	226	10.2
Total	1,108	100.0	1,095	100.0	2,203	100.0

Measures

The 1985 NIDA Survey was the first in the series to include a measure of depression, or any measure of psychopathology other than substance abuse. This construct is operationalized using 12 items taken from the Center for Epidemiologic Studies Depression (CES-D) Scale. The CES-D has been used in a number of community surveys, including Kansas City, Missouri, and Washington County, Maryland (Comstock & Helsing, 1976; Radloff, 1977), Alameda County, California (Roberts, 1980), Los Angeles County, California (Frerichs, Aneshensel & Clark, 1981), and in the National Health Survey (Sayetta & Johnson, 1980), among others.

Specifically, the scale was designed to measure the current level of depressive symptomatology, with emphasis on the affective component, depressed mood (Radloff, 1977). Items were selected for inclusion from previously validated depression scales to represent the major components of depressive symptomatology identified from the clinical literature and factor analytic studies (Radloff, 1977). These components are depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance.

The reliability and validity of the scale have been assessed on clinic populations (Craig & Van Natta, 1973; Roberts, Vernon & Rhonades, 1989; Weissman, Sholmaskas, Pottenger, Prusoff, & Locke, 1977;) and on respondents from a number of community studies (Comstock & Helsing, 1976; Radloff, 1977; Roberts, 1980). Analyses indicate that the scale is reliable and shows fairly good convergent and discriminant validity in the subgroups examined.

The CES-D Scale may be either self- or interviewer-administered and consists of 20 items. The time frame for reporting symptoms is the past week. Scores may range from 0 to 60 with high scores indicating more negative symptomatology. Items are weighted by the frequency of occurrence so that a high score may indicate either many symptoms of a short duration or fewer symptoms experienced for longer periods of time. The usual response formats are: (0) Rarely or none of the time (less than a day); (1) some or little of the time (1-2 days); (2) occasionally or a moderate amount of the time (3-4 days); and (3) most or all of the time (5-7 days).

The original 20 CES-D items are presented in Table 3, with the 12 included in the 1985 Survey identified. For the 12-item version, scores range from 0-36. Ethnic status is derived from two questions, one inquiring about ethnic origin generally (e.g., Black or White, not of Hispanic origin; or Hispanic) and one about Hispanic origin (e.g., Puerto Rican, Mexican, Cuban, other).

In presenting these initial data, two types of results are presented: internal consistency reliabilities and prevalence of depressive symptoms by age, gender, and ethnic group. Of the various measures of internal consistency reliability (split-half; Kuder-Richardson; Cronbach's alpha), the one most frequently used in recent years in assessing scales of well-being is Cronbach's coefficient alpha since it can be used with multiple-scored items, e.g., response categories such as "often," "occasionally," "never" (Cronbach, 1951; Novick & Lewis, 1967).

There are few estimates of the reliability of measures when used with Mexican American samples although the data from several Hispanic community samples suggest that reliability may well be as high as for Anglos and Blacks (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980; Roberts, 1980; Vega, Kolody & Warheit, 1985). However, no reliability data exist for community samples using the 12-term version of the CES-D. Furthermore, we do not know whether reliability will vary across subgroups defined in terms of ethnic status (Anglo, Black, Mexican-American), language (Spanish, English), or age (adolescent/younger adults/older adults), gender or education. Thus, the first order of business will involve reliability assessments.

Several strategies can be employed to estimate prevalence. The most straightforward approach involves selecting a criterion score for estimating "caseness." This can be done a number of ways, such as defining as "cases" respondents whose depression scores are

Table 3. The Center for Epidemiologic Studies Depression Scale Items

Full Scale	*NIDA Version*
1. Bothered by things that usually don't bother me	*
2. Did not feel like eating; appetite was poor	*
3. Felt could not shake off the blues even with help from family or friends	*
4. Felt just as good as other people	X
5. Had trouble keeping mind on what was doing	X
6. Felt depressed	X
7. Felt that everything was an effort	X
8. Felt hopeful about the future	X
9. Thought life had been a failure	*
10. Felt fearful	*
11. Sleep was restless	X
12. Was happy	X
13. Talked less than usual	*
14. Felt lonely	*
15. People were unfriendly	X
16. Enjoyed life	X
17. Had crying spells	X
18. Felt sad	*
19. Felt that people dislike me	X
20. Could not "get going"	X

*Omitted

above the mean or whose score places them in the upper quartile, etc. One strategy we have used with good results is one standard deviation or more above the mean for the total sample. For such analyses, the CES-D items are scored in the usual fashion. That is, the 12 items are summed, with a higher score indicating greater impairment. Prevalence is then calculated as the percent of a group with scores above the particular cut point.

There are other possibilities, of course. Following the lead of Wells, Klerman and Deykin (1987), prevalence can be calculated as the percent reporting symptoms which lasted 3 days or more, or symptoms which lasted 5 days or more. Such a procedure places more emphasis upon duration of symptoms, ostensibly indicating more chronic and/or severe impairment.

For this presentation, three measures of impairment are presented: mean scores, the percent scoring above the grand mean, and the percent scoring one standard deviation or more above the grand mean. Using these measures precludes comparisons with the results of other surveys of adolescents which have used the CES-D. All other surveys have used the full 20 items and, as yet, we do not have a reliable algorithm for comparing CES-D12 and CES-D20 scores directly.

Findings

Cronbach's alpha (shown in Table 4) for the total sample was 0.75, which compares favorably with that reported for the full 20-item version of the CES-D (generally above 0.8), given the attenuated item set. There was in general little variation across subgroups, most being in the 0.7–0.8 range. There was slightly lower (.68) reliability for the adolescent group. Based on these findings, the CES-D12 seems to be operating in an acceptable fashion in the subgroups of interest.

The distribution of scores seems coherent as well (shown in Table 5). In terms of age, there is nothing dramatic. Those 35 years of age or older consistently have the lowest depression values. The age threshold seems to be 25, and those under that age report more depressive symptomatology across all three measures. However, the

Table 4. Internal Consistency Reliability (α) for Gender, Age, Ethnic Status, and Total Sample, 1985 NIDA Survey

Group		*Alpha (α)*	*N*
Gender	Male	0.71	3462
	Female	0.76	4431
Age	12–17	0.68	2219
	18–25	0.75	1775
	26–34	0.79	2125
	35+	0.77	1774
Ethnic Status	Black	0.72	1912
	Anglo	0.75	3889
	Hispanic	0.76	1194
	Mexican	0.74	1194
Total		0.75	7893

Table 5. Distribution of CES-D12 Scores by Gender, Age, and Ethnic Status: Mean Scores and Prevalance Rates (%)

Group	*X Score*	*% ≥ X**	*% ≥ 1S.D.(X)†*	*P Value*
Age				
12–17	6.73	46.2 (1036)	16.3 (365)	.000
18–24	6.60	43.5 (787)	17.4 (315)	
26–34	5.68	33.9 (733)	14.0 (302)	
35+	5.43	33.1 (598)	13.6 (245)	
Ethnic Status				
Anglo	5.48	33.3 (1312)	12.2 (480)	
Black	6.95	47.0 (913)	18.6 (362)	.000
Mexican Origin	6.72	44.9 (548)	18.0 (220)	.413
Other Hispanic	6.46	43.0 (321)	18.2 (136)	
Gender				
Male	5.53	35.4 (1244)	12.0 (423)	.000
Female	6.60	42.4 (1910)	17.9 (804)	

*Percent scoring above total sample mean.
†Percent scoring one standard deviation or greater above the total sample mean.

age effect is not dramatic overall, which is what has been reported in general. In terms of ethnic status, the principle effect seems to be a minority status effect. That is, Anglos consistently report less depression than Blacks or Hispanics, including respondents of Mexican origin, in fact dramatically less. Based on comparisons of crude rates, that is what has been reported in other studies (Roberts, 1987b; 1988). As has been reported in most studies using the CES-D20, there also was a dramatic gender effect, with females reporting much more depression.

Turning to the age group 12-17 (defined here as children and adolescents), we find the same general effect for gender (shown in Table 6). Within each ethnic group examined, and on each of the outcome measures, females report more depression than males. Perusal of the ethnic effect reveals a slightly different pattern for the youngest segment of the sample. Among males, the lowest rates are reported by other Hispanics (largely Puerto Rican and Cubans), with Anglos and Blacks intermediate (and little different), and Mexican

origin youth reporting the most depression. However, the real contrast for males is between the Anglo and Mexican origin groups on the standard deviation prevalence measure ($p = 0.02$). The Mexican origin/Other Hispanic contrast also was significant on this measure ($p = 0.05$). Among females, there is a slightly different pattern, with other Hispanics reporting least, Anglos intermediate, and Black and Mexican origin youth reporting the most depressive symptoms. For females, the contrasts of most interest are Anglo versus Mexican origin on the percent scoring above the mean ($p < 0.05$) and Anglo versus Black ($p < 0.001$). On the standard deviation prevalence measure, the two contrasts to note are Anglo versus Mexican origin ($p < 0.05$) and Mexican origin versus other Hispanic ($p < 0.05$).

It should be noted that while these results mirror in many respects what has been reported for adults, thus far they are based on comparisons of crude rates. As I have noted elsewhere (Roberts & Vernon, 1984), adjustment for demographic and socioeconomic differences among ethnic groups typically eliminates observed differentials in crude rates. As can be seen in Table 7, adjustment for age, gender, and perceived health status of the adolescent, as well as the occupational status of the head of the household, reduces the crude differentials but only marginally. After adjustment, there is still a significant difference among the four ethnic groups in terms of mean scores and the percent scoring one or more standard deviations above the grand mean. On both measures, the difference is attributable to higher rates for the Mexican origin adolescents. On

Table 6. Distribution of CES-D12 Scores by Gender and Ethnic Status: Among 12–17 Year-Olds: Mean Scores and Prevalance Rates (%)

	Male			*Female*		
Ethnic Group	*X*	*% ≥ X**	*% ≥ 1S.D.(X)*	*X*	*% ≥ X**	*% ≥ 1s.D.(X)†*
Anglo	6.10	41.7 (218)	11.7 (61)	6.90	43.9 (206)	18.1 (85)
Black	6.11	41.7 (113)	12.2 (33)	7.80	57.4 (183)	21.0 (67)
Mexican Origin	6.93	48.7 (96)	18.3 (36)	7.94	53.3 (104)	25.6 (60)
Other Hispanic	5.63	41.0 (48)	10.3 (12)	6.34	45.9 (50)	14.7 (16)
P-Value		.33	.08		.001	.07

*Percent scoring above total sample mean.
†Percent scoring one standard deviation or greater above the total sample mean.

Table 7. Crude and Adjusted* CES-D Measures by Ethnic Group for 12–17 Year-Olds

	Ethnic Group				
CES-D12 Measures	Anglo (n = 986)	Black (n = 586)	Mexican Origin (n = 390)	Other Hispanic (n = 221)	Beta Coefficient
Mean ($\overline{X}$)					
Crude	6.47	7.05	7.46	6.06	.09**
Adjusted	6.56	6.56	7.46	6.14	.08**
% $\geq \overline{X}$					
Crude	42.0	50.0	51.0	44.0	.08**
Adjusted	43.0	46.0	51.0	44.0	.06
% $\geq$ 1S.D.($\overline{X}$)					
Crude	14.0	17.0	22.0	12.0	.08**
Adjusted	15.0	15.0	22.0	14.0	.07*

†Adjusted for age, gender, and perceived health status of adolescent, and occupation of head of household.
*P < .05
**P < .001

the other measure, the Mexican origin group also has a higher rate, but not significantly so.

Risk Factors

What is the evidence concerning risk factors for psychological disorders among people of Mexican origin? Does there appear to be anything unique about the Mexican origin experience that increases or decreases the risk of developing psychological disorders? For most purposes, risk factors can be grouped into two broad classes: psychosocial or biological. As yet, we have no data on the role of biological risk factors in the etiology of disorders such as depression, schizophrenia or alcoholism in minority populations. The same can be said of family history, a factor which combines in many respects biological (i.e., genetic) and psychosocial (i.e., family environment) components of risk in one surrogate measure. This should not be surprising, since research findings on the role of biological factors and family history in the majority population are neither comprehensive nor compelling for most psychological disorders. There are data suggesting both genetic and biochemical origins for diseases such as schizophrenia, depression, and alcoholism, but thus far the role of

such factors in the etiology of these disorders is neither well-described nor well-understood (Regier & Allen, 1981).

What about the role of social, psychological and cultural variables in the etiology of mental disorders in the Mexican origin population? Where psychosocial risk factors are concerned, the evidence accumulated thus far also is not very instructive. A number of authors have reviewed what is known about psychosocial factors both in the general population (Akiskal, 1979; Eaton, 1981; Roberts, 1987b), and the Mexican origin population (Cuellar & Roberts, 1984; Cervantes & Castro, 1985; Vega, Warheit & Meinhardt, 1985; Roberts, 1987a). In general, psychosocial risk factors can be grouped into one of three general classes (Roberts, 1987b): status attributes (age, gender, social class, marital status, and ethnic background), personal resources (personality, coping skills, or social support), and life stress, including life events such as illness, death of a significant other, and immigration, as well as, chronic strains such as, marital difficulties and acculturative stress. With regard to the role of life stress and personal resources in the occurrence of depressive illness or symptoms among Mexican origin people, we know practically nothing. With regard to whether and how social statuses in this population affect risk of depression, we are not much better off

Through 1984, data had been published from only nine community-based, epidemiologic studies of mental health in this population conducted over a period of two decades. All of the studies employed measures of demoralization as their outcome variable. What these studies tell us about the role of such factors as age, gender, social class, marital status, and ethnicity has been summarized succinctly by Vega, Warheit and Meinhardt (1985). In the case of gender, social class, and marital status, rates appear to be higher for women, those in the lower socioeconomic strata, and those who are separated and divorced, which is what has been reported for other U.S. adults. Vega, Hough and Miranda (1985) note that age seems to operate differently in several studies than has been reported for non-Hispanics, suggesting rates are higher for older Mexican Americans, perhaps related to marginal acculturation, foreign birth, and minimal educational achievement. Again, although the existing data are extremely limited, there seems little evidence to suggest that for generic risk factors such as gender, marital status, or social class, the risk profile is different for adults of Mexican origin. These results on risk factors are all based on studies

of adults; there is no comparable compilation of risk factor profiles for Mexican origin children and adolescents.

There is one dimension of the life experience of people of Mexican origin that, at least from a theoretical perspective, might constitute a unique risk. This is acculturation, the sociocultural adjustment occurring when two or more differing "cultures" interact. Clearly the concept of acculturation has come to occupy a central place in social science discussions of the Mexican origin experience, particularly in regard to its implications for psychological functioning.

A number of papers examined and reviewed this issue (Burnam et al., 1987; and Roberts, 1987a,b;). Based on results thus far, research has not been able to clearly delineate the role of acculturation in the process of successful psychological adaptation among either adults or children. Mexican origin, its attendant culture, and its interaction with mainstream American culture may have mental health implications for those involved in the acculturation process, but thus far we have been unable to convincingly demonstrate the nature or the magnitude of the effect.

Research on risk factors for psychiatric disorders among Mexican origin youth is essentially nonexistent. Research on risk factors for depressive symptoms using the NIDA data is still in progress. There are, however, some preliminary results. In Table 8 are pre-

Table 8. Factors Associated with Emotional Disorders Among Children and Adolescents

Study	Age	Gender	SES	Ethnic Status
Anderson et al., 1989	NA	B<G	NA	NA
Bird et al., 1988	NA	NA	L<H	NA
Velez et al., 1989	Y<O	B<G	L>H	NA
Costello, 1989	Y=O	B<G	NA	NA
Offord et al., 1989	Y<O	B<G	L>H	NA
Weinberg & Emslie, 1987	NA	B<G	NA	A<B<H
Roberts	Y=O	B<G	L>H	A<B<MO

Y = younger, O = older
B = boys, G = girls
L = lower socioeconomic status, H = higher socioeconomic status
A = Anglos, B = Blacks, MO = Mexican Origin, H = Hispanic

sented some initial findings for four factors: age, gender, socioeconomic status, and ethnic status. Comparative data from recent community-based studies of children and adolescents are taken primarily from a recent review by Costello (1989). The NIDA results, of course, are for the CES-D12. Those from Costello are for "emotional disorders," including depressive and anxiety disorders. For the NIDA survey, among 12-17 year-olds, there was little age effect; girls reported more depressive symptoms than boys, lower status reported more than higher status youth, and minority youth reported more than majority group youth in a majority of the comparisons. Mexican origin youth reported much higher rates of depression. Our data thus are consistent with those reported by Weinberg and Emslie (1987). The patterns for gender and socioeconomic status are concordant with those from other studies reviewed by Costello, whereas the age effect is mixed.

Research Issues

I believe that I have demonstrated that we know very little about the epidemiology of psychological disorders among Mexican origin children and adolescents. The lack of research on the mental health of the youth of this American sub-nation is indefensible scientifically or politically, given its size, social characteristics and rapid growth. Clearly there is an urgent need, as we approach the twenty-first century, for more systematic knowledge about the mental health of this group. Thus, we need more research, but I believe the research should be guided and informed by issues that have limited the usefulness of much of the research on adults.

What are the research questions which should drive future epidemiologic investigations of child and adolescents disorders in the Mexican origin population? I offer the following list as a point of departure:

1. What is the prevalence of clinical disorders?
2. What is the incidence of clinical disorders?
3. What is their natural history?
4. What are the consequences of clinical disorders?
5. What are the etiologic factors involved?
6. What is the role of generic risk factors such as age, gender, socioeconomic status, social support, life events and chronic strains, or family history vis-a-vis psychiatric disorders among Mexican origin youth?

7. What are the joint effects of minority status, ethnic culture and social class on psychiatric risk among Mexican origin youth?
8. What is the impact of acculturation?

Clearly there are many more, hypothesis-specific research issues that could be addressed (Institute of Medicine, 1989). I submit, however, that these represent the most basic questions, ones that are fundamental to an understanding of the epidemiology of mental, behavioral, and developmental disorders among children and adolescents.

Psychological and behavioral disorders clearly are the result of lifelong interactions among biological, psychological, and socio-environmental factors (Cooper & Morgan, 1973; Regier & Allen, 1981; Roberts, 1987b). Accordingly, fuller understanding of the etiology of psychological disorders will require explanatory models which reflect the presumed multifactorial nature of the phenomenon being studied. Thus far, no studies of Mexican origin adults or children satisfy this condition. Research results published to date do not even permit us to answer the question of whether Mexican origin increases, decreases, or has no effect on risk of psychological disorder, in general, or in terms of specific problems, such as bipolar and unipolar depression, anxiety disorders, or alcoholism.

Three types of methodologic inadequacies have compromised much of our research efforts. First, sampling has been a continuing problem, both in terms of size and representativeness. Almost without exception, studies have been based on data from small samples typically drawn from a single community, barrio, or school. Such samples clearly do not represent the diversity of the Mexican origin population in the United States, nor do they permit exploration of the mental health experience in Mexican origin subgroups defined by geographic region, rural/urban residence, language use, birthplace, generation, or social class, all considered important factors shaping the life experience of this ethnic group (Cervantes & Castro, 1985; Vega, Hough & Miranda, 1985).

A second, principal deficiency in epidemiologic studies of mental disorders among persons of Mexican origin has been the reliance on cross-sectional prevalence studies rather than prospective incidence studies. Identification of factors associated with prevalence do not necessarily tell us anything about etiology. Factors related to prevalence actually may be the result of duration effects and not etiologic effects. That is, the factors sustain the illness rather than cause it. Thus far, there have been no data published from a prospective,

epidemiologic study of risk factors for mental disorder in this group. Where studies of children and adolescents are concerned, a longitudinal perspective is essential if interactions of biological and social developmental factors with culture and social class are to be accurately assessed.

Measurement has been problematic, and several issues are worth noting. First, with the exception of three studies (Burnam et al., 1987; Moscicki et al., 1987; Vernon & Roberts, 1982), all of our published information from community-based epidemiological studies of the mental health of this population was obtained using nonclinical, nonspecific measures of distress. Such measures tell us nothing about the prevalence, type, or severity of clinically diagnosable psychiatric disorder in these subgroups. From the perspective of epidemiology, as well as program planning and evaluation, we need both types of data (Roberts, 1987b). Second, we know very little about the reliability and validity of most of our measures of psychological dysfunction when used with minority youth. This is particularly true in the case of some of the structured diagnostic interviews that have been developed for use with children and adolescents, such as the Diagnostic Interview for Children and the Schedule for Affective Disorders for School Age Children (Edelbrock & Costello, 1988). A major problem in this regard has been the lack of assessment procedures that are adequately translated and standardized with English and Spanish equivalency demonstrated (Cuellar & Roberts, 1984). Third, even when the reliabilities appear to indicate equivalence across ethnic or cultural groups, there is the issue of which symptoms are elicited in a reliable fashion. That is, often we do not know whether the phenomenology of disorder is similar across groups. Other than a few studies of folk medicine syndromes, we have little evidence about whether and how Mexican cultural background shapes psychopathology in ways unique to this population (Cuellar & Roberts, 1984) in children or adults.

I would like to end this discussion by outlining some suggested research strategies for epidemiologic investigations of the causes and consequences of psychological disorders among Mexican origin children and adolescents:

1. First, we need to develop conceptual frameworks that explicitly acknowledge that the causes and consequences of psychological and behavioral disorders involve the interactions of biological, psychological, and socioenvironmental factors. Furthermore, we need

multivariate strategies to compare the contributions of diverse arrays of risk factors, thereby facilitating the simultaneous testing of competing hypotheses.

2. We also need to employ more longitudinal designs, focusing on both antecedents and consequences of disorders.
   a. Followup periods should be designed to encompass the passage of critical developmental stages.
   b. The focus should be on prevalence and incidence, as well as natural history (duration, remission, recurrence).

3. Our sampling designs should address the low base rate problem versus the need for sufficient numbers of cases of specific disorders.
   a. This means, among other considerations, more innovative use of multi-stage strategies for case-ascertainment, and
   b. Sampling strategies recognizing the geographic and socioeconomic characteristics of minority populations.

4. We should make greater use of multi-method strategies for assessing the presence and severity of psychopathology among children and adolescents from minority populations.
   a. We should consider the use of both self-report symptom scales and diagnostic interviews.
   b. Additionally, we should use observational techniques and reports of significant others (parents, teachers, siblings).

5. Comparative designs are imperative, involving at the very least a two-group comparison—the majority and the minority group of interest, thereby permitting us to:
   a. Focus on comparative descriptive profiles (incidence, prevalence, severity, natural history, etc.) and
   b. Focus on comparative etiologic profiles (relative risks for the same factors and identification of different factors, etc.).

Research which incorporates these strategies will go a long way toward generating more useful information on the occurrence of mental disorders among Mexican origin children and adolescents, as well as the antecedents and consequences of these disorders. Whatever form such research assumes, however, it is imperative that it be done.

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3

The Role of Cultural Factors in Mental Health Problems of Hispanic Adolescents

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The two major objectives of this paper are to describe a large epidemiologic field survey, which is designed to determine the relationships between cultural adaptation and psychosocial well-being among a sample of Hispanic adolescents; and to identify some of the most salient theoretical and methodological problems associated with attempts to conduct large scale, empirical studies focusing on this issue.

Establishing the relationships between cross-cultural adaptation and its mental health sequelae represents a difficult research arena for those interested in developing descriptive and/or explanatory models based on empirically derived data. This is undoubtedly one of the reasons why so little empirical research on the topic has been reported (Vega et al., 1985; Rogler et al., 1989). Nevertheless, the issues involved are extremely important ones for psychiatric epidemiologists, particularly in light of the increased numbers of new immigrants coming to the United States. Although all immigrants are undoubtedly compelled to adapt to life in a new culture, our research is primarily interested in adolescents, a group we believe to be at unusual risk for intercultural conflicts associated with adaptation, acculturation, and assimilation. Specifically, we are addressing issues related to these topics, which we believe have the potential to provide us with the foundations on which an explanatory model can be constructed: (1) the cultural orientation of the adolescent; (2) the acculturative conflicts between adolescents and parents; (3) the adjustment and acculturative strains experienced by both the family and the adolescent in American society; and (4) the protective role of specific cultural values as they related to both coping and conflict.

For decades, ethnographic researchers have noted that immigrants and their children are subjected to psychological stresses as a result of the social, psychological and cultural processes inherent in moving from one social and cultural environment to another one. For example, Mead (1949) distinguished first generation from second generation cultural accommodations, referring to the former as a "primary-contact condition" and to the latter as a "secondary-contact condition". In making this comparison, Mead noted that a secondary-contact condition is probably more personally disorganizing because of the lack of consistent socialization and possible conflicts between parental cultural expectations and those of the wider society. More recently Szapocznik et al. (1977) and Szapocznik and Truss (1978) noted in their clinical studies that there is a pattern where large differences in cultural orientation between Cuban parents and their male adolescent children are related to behavior problems and drug use among the offspring (Szapocznik, et al., 1977; Szapocznik & Truss, 1988). In addition, others have reported systematic observations which indicate that the children of immigrants who are exposed to competing cultural definitions, values, and behaviors may be more vulnerable to mental health or conduct problems than those not experiencing these conflicts (Favazza, 1980; Vega et al., 1983; Ramirez, 1984).

These earlier research efforts have helped identify many of the risk factors and the mediating variables related to social and cultural adaptation and their psychosocial impacts. However, if we are to increase our understanding of these dynamic and complex processes, prospective studies are needed. Moreover, these studies must be based on comprehensive designs which integrate existing theories and empirical approaches (Kessler & Greenberg, 1981). These designs will, of necessity, combine elements of traditional, descriptive epidemiology, acculturation research, social psychological stress theory, theories of adolescent development, and the measurement of mental health status. Research designs lacking this comprehensive and methodological integration will not be able to address the fundamental questions concerning the relationships between acculturation processes, including personal, social, and cultural conflicts, and the mental health status of the adolescent children of immigrants. Some questions we are addressing in our present research include the following: (1) do conflicts between parents and adolescents occasioned by differences in cultural orientations differ significantly from ordinary intergenerational tensions; (2) do predictors of intergenerational conflict vary among diverse Hispanic ethnic groups and/or

by social class level; (3) what are the systematic sources of acculturative stress that contribute to mental health problems among Hispanic adolescents; (4) are the risk factors for mental health problems, delinquency and drug abuse similar for Hispanic and non-Hispanic adolescents; and (5) which specific theories of adolescent psychological development are most useful for interpreting the effects of cultural factors on adolescents?

Design of the Research

The study described in this paper is known as the "South Florida Youth Development Project." The project commenced October 1, 1990 and is supported by the National Institute of Drug Abuse (NIDA). The research site is Dade County (e.g., metropolitan Miami), Florida, an area which has an estimated Hispanic population of approximately one million persons. This is a complex Hispanic population. About 60% of the total is of Cuban origin. The residual group includes a spectrum of Caribbean Basin, Central, and South American nationalities. Dade County also includes large African-American and non-Hispanic white populations, as well as various other non-Hispanic Caribbean ethnic groups such as Haitians, Jamaicans and Bahamians. This polyglot of ethnic varieties, which encompasses all socioeconomic strata, provides an excellent context for multi-cultural research.

The study design can be summarized as follows. All male students entering either a middle school or junior high school in Dade County were asked to participate in the study. The Dade County School District is the fourth largest unified system in the nation. There are an estimated 10,000 adolescent boys attending fifty different schools in the county. The boys in the sample are between 11 and 14 years of age when they entered the study, and because of this young age, few if any of the male adolescents of interest had dropped out of school or had experienced conduct problems serious enough to warrant their referral to the criminal justice system. The study is longitudinal in design and called for interviewing those in the sample once annually for three years. It was anticipated that approximately 7,000 to 8,000 students would participate in the first wave of the study and that there would be an attrition rate of about 40% over the entire course of the research. Non-participants consisted primarily of students for whom parental consent was not obtained, or who were absent at the time the questionnaires were administered, and who migrated to areas beyond the Miami-Hialeah and Fort Lauderdale consolidated Metropolitan Statistical Area (CMSA). Table 1

contains information on the multi-wave design including data on anticipated attrition.

Extensive research has indicated that self-reports of children regarding their mental health status are not always indicators of their mental health functioning or behavior problems (Achenbach, 1985). Therefore, we planned for parent and teacher collateral reports for a random subsample of 3000 participants, to be obtained for all three waves of the study. The adolescents and teachers were given questionnaires; and the parents were interviewed either by telephone or in face-to-face situations. The primary instrument for determining mental health problems among those in the sample is the Child Behavior Checklist (CBCL) (Achenbach, 1983). The Parents and Teachers Report Form was employed as part of the collateral phases of the study (Achenbach, 1986). These instruments were intended to identify problems and competencies manifested in differing domains of life activity which require differing interpersonal skills, role performance, and emotional maturity. As noted by Achenbach et al. (1990), childhood disorders cannot be fully understood on the basis of observations in only one environment or culture. Environmental contexts such as home versus school, the different interaction patterns present in these contexts, and differences between informants perspectives are all apt to contribute to the variations found between sources of data on children.

The self-report questionnaire for the adolescent sample contains items to assess health status, including questions from the CBCL and the Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977). The adolescent questionnaire also contains sets of items designed to determine drug use, beliefs and behaviors, suicidal ideation and behaviors, demographic characteristics, cultural and acculturation factors, self-esteem, perceived social supports, family functioning, and perceptions of deviancy of self and friends. In addition, the school system provided information about academic performance and conduct problems for all those in the student sample. The multi-ethnic nature of the sample logically calls for the comparative analyses of risk factors for mental health problems among different ethnic subgroups. It was anticipated that approximately 50% of the sample would be Hispanic, 27% would be African-American and/or other Caribbean black origin groups, and 23% would be non-Hispanic whites. One of our analytic goals is to predict the future rates of mental health and drug use problems among different subgroups from the risk factors we will identify. This approach will

Table 1. Sample Selection/Follow-up

CONSENT REQUESTED	TIME1 Baseline Participants	TIME 2 Participants	TIME 3 Participants
	——> 3,000 Parents	——> 2,400 Parents	——> 1,920 Parents
Students N = 10,000	——> 7,000 Students	——> 5,600 Students	——> 4,480 Students
	——> 3,000 Teacher Ratings	——> 2,400 Teacher Ratings	——> 1,920 Teacher Ratings

be useful in its own right, and it will also allow us to determine the reliability of the findings reported by Lewinsohn et al. (1988). They have reported from their prospective study of non-Hispanic white adolescents that most mental health problems emerged during junior high school and that the lifetime prevalence of psychiatric disorders in this group did not increase appreciably thereafter. Parenthetically, a recent Florida state-wide survey of drug use in middle and high schools has indicated that the life-time prevalence rates for smoking, alcohol use, and marihuana use were similar in middle schools and high schools (Statewide Florida Survey, 1988).

Several process theories of deviance, drug use, and mental health problems will also be tested. For example, Kaplan's theory of self-derogation posits that people characteristically behave so as to minimize the experience of self-rejecting attitudes and to maximize the experience of positive self attidudes (Kaplan et al., 1986, 1987). This is a transactional model which assumes that when adolescents experience self-rejection they are motivated to alter the interpersonal circumstances responsible for these feelings. This approach assumes that in most instances adolescents will be responding to the evaluations of their parents and that when these are negative they will respond to them by either exhibiting more acceptable behaviors, or by rejecting their parental definitions in favor of those offered by their peers. When the latter occurs, it is hypothesized that those involved will redefine themselves in ways consistent with their primary reference group expectations, a process that often involves familial conflict. Using this theoretical framework, itis possible to introduce other explanatory factors, such as intergenerational acculturative

conflicts and environmental acculturative stressors into the development of an explanatory model.

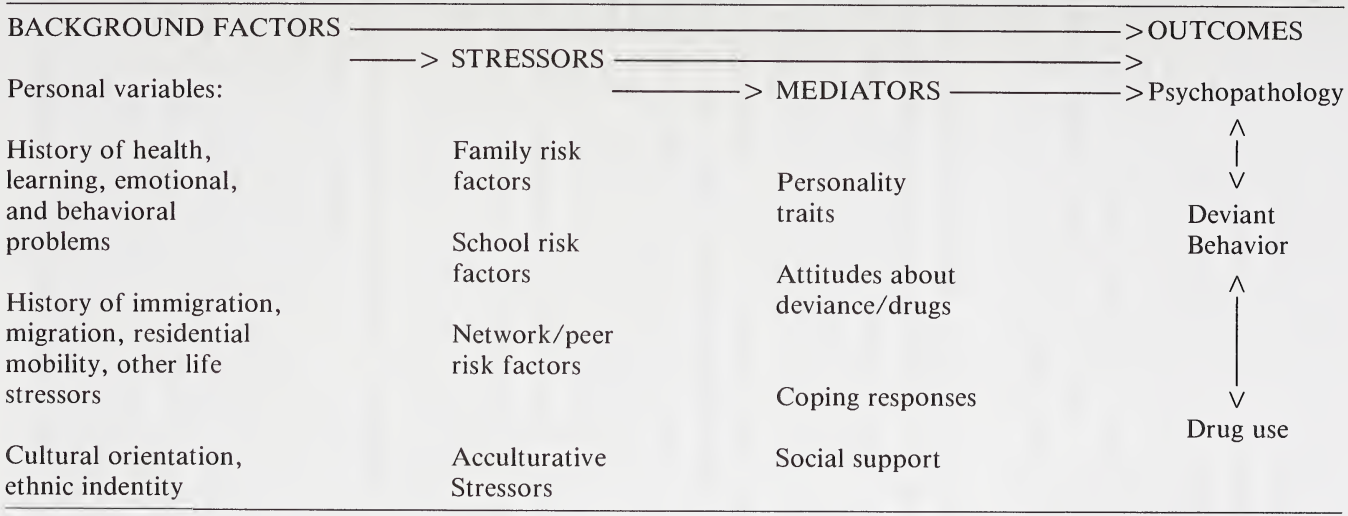
The use of theories such as the self-derogation model also facilitates direct comparisons between and among different ethnic and racial groups. These comparisons will reveal whether etiologic processes appear to be similar across cultures, and/or whether specific psychosocial or cultural factors significantly modify the explanatory model being used to guide our research. A persistent inability to change feelings of being devalued is believed to be associated with familial conflict and rejection, depression, suicide, conduct problems, the selection of deviant peers, as well as substance abuse.

In order to incorporate these various research objectives into an operational model that lends itself to latent variable structural analysis, the integrative framework in Figure 1 will be used to facilitate this process. This framework provides a basis for formulating hypotheses which will be tested to determine the independent and interactive effects of latent variables net of measurement error. The theoretical model guiding these focuses on the social psychological stress process. Moreover it presupposes multiple casual paths, multiple outcomes, and non-recursive relationships among the various explanatory factors. This type of model facilitates multistage analytical procedures for hypothesis and theory testing. It includes canonical correlations, confirmatory factor analyses, and Grade of Membership analysis (GOM) which creates latent classes based on important explanatory factors such as acculturative stress or cultural orientation (Manton et al., 1986).

Issues of Measurement and Taxonomy

The assessment of child and adolescent psychopathology is still in its early stages of development. Efforts to design and test instruments for use with pre-adult populations have included those of Achenbach et al. (1990) and Edelbrock and Costello (1988). The theoretical and methodological assessment issues of child/adolescent mental health problems among Hispanics have been pioneered by Bird et al. (1988a, 1988b) in Puerto Rico. As in adult psychiatric epidemiology, two major types of measurement instruments have emerged. One of these focuses on the making of DSM-IIIR type diagnosis. The Diagnostic Interview Schedule for Children (DISC) is now being refined for use in a series of community studies in the United States (Costello, 1985). This is a fully structured instrument

Figure 1. Integrative Framework of Hispanic Adolescent Mental Health



which requires the presence of a certain number of symptoms and exclusions, which are judged within the context of their recency, duration and severity. This "standardization" of the DISC may be premature given the relatively meager knowledge currently available regarding cross-cultural differences in mood, thought, and behavioral disorders among children. Achenbach et al. (1990) have cautioned researchers/scholars on this issue by emphasizing that "cultural differences in language, child rearing customs, education, social standards, diet, stress, coping strategies, and opportunities may affect the prevalence of disorders and the form they take, and what is done when a disorder is deemed present" (Achenbach et al., 1990, p. 84).

In our opinion, the DSM-IIIR diagnostic categories on which the DISC is based can be viewed at present as preliminary and heuristic concepts. The validity and reliability of the DISC has not yet been sufficiently established, particularly as it relates to Hispanic and other ethnic populations in the United States and elsewhere.

Currently, important development work has been conducted on the DISC, in order to have a version available for multi-site, collaborative epidemiologic surveys in the United States. It will be several years, however, before the validity and reliability of the DISC as a method for case ascertainment among children and adolescents can be empirically established. Futhermore, the "present-absent" nature of all DSM-IIIR type diagnostic case ascertainment imposes serious limitations on basic epidemiologic field studies since extremely large samples are needed to generate enough cases to determine the prevalence and/or incidence of the various disorders, and concurrently one cannot determine, definitively, the validity and reliability of the findings if they are based on a small number of cases. These problems are exacerbated when one attempts to extrapolate either the findings or the case identification procedures to populations other than the ones surveyed. The implications of these conclusions are self-evident when one is interested in determining the prevalence of mental health problems among ethnic and racial subgroups, especially when cultural differences are profound.

An alternative approach to the measurement of child and adolescent mental disorders is to use empirically derived symptom and behavior scales such as the CBCL (Achenbach & Edelbrock, 1981). These measures are empirically derived by conducting an exhaustive inventory of mood, ideational, and conduct reports from clinicians,

counselors, teachers, parents, and others who treat or care for children and adolescents. This exhaustive list is then reduced by eliminating all items that are not mentioned by at least 5% of raters. The resulting checklist (the CBCL in this instance) is then validated with clinically referred and non-referred children. The results of these validity studies have shown conclusively that disturbed children can be reliably identified. Moreover, scales such as the CBCL can be used either as a continuous measure or to determine the presence or absence of syndrome/disorders. The use of continuous measures have obvious analytic advantages not shared by procedures which produce categorical data only.

As previously mentioned, the CBCL and similar instruments have the advantage of multiple observer ratings made by individuals who have observed the child functioning in a variety of different environments including home and school. Futhermore, the approach has advantages for use in cross-cultural research since those making the ratings will be applying culturally relevant criteria as they make their assessments.

The problems of cross-cultural validity is substantially mitigated by the use of the CBCL because the mental health problems can be confirmed by teacher/parent judgements and the cut-points on the subscales can be set to reflect differences in cultural behaviors. In essence, the CBCL is more likely to be empirically grounded than instruments like the DISC because it does not impose cultural parameters on the symptoms and behaviors being assessed. Rather, the naturally occurring symptoms in a population are allowed to define the clinically salient syndromes. The scale score comparisons can also be used for making intra-ethnic and inter-ethnic comparisons in several ways. Total scale scores, broad and narrow-band syndromes, discrepancies between raters, and covariation with other heuristically meaningful outcomes, such as drug use and deviance levels, can be empirically analyzed.

For example, in a recent paper by Achenbach et al. (1990), adolescents in both Puerto Rico and the U.S. mainland reported more problems than were reported for them by their parents or teachers; although Puerto Rican adolescents reported fewer symptoms than their mainland counterparts, the Puerto Rican parent and teacher raters reported more problems and fewer competencies than the mainland parents did for their children. Moreover, the researchers concluded that the CBCL validity identifies problem children who

have been referred in both populations. Different clinical cutoff points are probably needed, however, for valid cross-cultural assessments. For these reasons, the CBCL has been included in the research discussed in this paper because it offers more flexibility for studying mental health problems cross-culturally than the DISC at this point in time, and it is a more pragmatic tool for screening large scale community samples, especially when the protocol must be self-administered or when large numbers of other variables must be included in the questionnaire/interview schedule.

There are some important similarities in the syndromes identified by the DISC and the CBCL. Achenbach and Edelbrock (1981) have identified the DSM-IIIR disorders that have correlation with specific CBCL syndromes (Achenbach, 1983). These are shown in Figure 2. Beyond these disorders, the CBCL, as well as other items and scales we used, obtain information about depressions, in addition to enough data on drug use, including alcohol and tobacco to make some DSM-IIIR type diagnostic judgements.

Epidemiologic research on mental health problems among populations of Hispanic adolescents is rare. The most outstanding example is the recent survey conducted by Bird et al. (1988a) in Puerto Rico. This research has provided the first opportunity to compare the levels of psychological, emotional, and behavioral problems in a population of Hispanic children with non-Hispanic children liv-

Figure 2. Approximate Relations Between DSM-IIIR and Empirically-Derived Syndromes

DSM-IIIR	CBCL	TRF
Solitary Agressive Conduct Disorder Oppositional Defiant Disorder	Aggressive	Aggressive
Group Delinquent Conduct Disorder	Delinquent	Delinquent
Attention Deficit-Hyperactivity Disorder	Hyperactive Nervous-Overactive	____
Overanxious Disorder	Anxious-Obsessive Schizoid-Anxious	____

Adapted from T. Achenbach and Craig Edelbrock: *Manual For The Child Behavior Checklist*. Burlighton, Vt., University of Vermont

ing in the United States. A diagnostic protocol, the DISC and two empirical measures, the CBCL and the Global Assessment Scale (GAS) were employed. This excellent study was, however, only descriptive in character. As a consequence, the findings share the limitations of all descriptive research. Moreover, to date, there have been no carefully controlled analytic studies of Hispanic adolescents residing in the continental United States. Indeed, few are available for any ethnic or racial population. Therefore, our prospective study is an unusual opportunity to contribute to our understanding of the developmental processes and their linkage to mental health problems among children/adolescents with markedly differentethnic, racial, and cultural backgrounds.

Cultural and Social Adjustment

The mental health aspects and implications of cultural change and adaptation to new social environments have been extensively described in the social psychiatric literature (Mezzich & Berganza, 1984; Portes & Rumbaut, 1990; Kuo, 1976; Fabrega, 1969; Vega et al., 1987). Nevertheless, the mechanisms involved in the psychological transitions from one culture to another and the effects of the changes on personal functioning and social adaptation of those affected remain enigmatic. Despite a formidable body of literature on the hypothesized social, psychological, and emotional challenges posed by immigrant/migrant adjustment to new social environments, little empirical research has been reported on the effects of social adaptation and acculturation on mental health status, and empirical information focusing on children is virtually nonexistent.

To date, the conceptualization and measurement of cultural adjustment has focused almost exclusively on cultural orientation. In other words, primary attention has been given to the anchoring of individuals within a continuum of attitudes, values, and behaviors representing two presumably discrete cultures. Culture is a diffuse and complex concept, and it is extremely difficult to circumscribe conceptually. Cultural differences are more often a question of nuance than of stark contrasts. Nevertheless, although researchers in this field have recognized the multidimensional character of culture and the complexities of the acculturation process, measures of acculturation have tended to be unidimensional scales which locate an individual, or subgroup, along a continuum between hypothetically discrete cultural endpoints (Padilla, 1980; Cuellar et al., 1980;

Szapocznik et al., 1987; Montgomery & Orozco, 1984; Marin & Sabogal, 1987). Using this approach, acculturation has been measured in large field surveys and then used as an independent variable to predict health and mental health status, e.g., the Hispanic Health and Nutrition Examination Survey (*Hanes*) (Mosicki et al., 1989), and the Los Angeles Epidemiologic Catchment Area Project (ECA) Burnam et al., 1987).

Szapocznik et al. (1978) reported on the development of a linear acculturation measure which focuses on values and behaviors among Cubans in Miami. Using this approach, empirical tests have confirmed that acculturation in this population was a function of exposure, time, and gender. Young males with a significant time in country were found to have the highest rate of acculturation, followed by young females, then by their parents. Futhermore, this same group of researchers has also reported a direct relationship of disjunctures in values between parents and male children and intergenerational conflicts in the family. This process has been typified by an increase in the use of authoritarian and highly rigid parenting techniques in efforts to regain control of children. One of the outcomes of this approach has been the alienation of children and the rejection of parental values and lifestyles. Although much of this work is based on clinical observation and/or the use of small community samples, the results are provocative and worthy of followup with carefully controlled comparisons of larger community samples.

Other researchers have used unidimensional measures of acculturation as indicators of psychological conflict among adults. For example, reflecting the logic of using Hispanic and Anglophone cultures as representing polar ends of a continuum, some researchers have divided the acculturation process into three stages: monocultural Hispanic, bicultural, and monocultural Anglo. Within this scheme, bicultural orientation is hypothesized to be the optimal mode of adjustment because it minimizes the personal alienation and estrangement from primary and secondary reference groups for those caught up in the acculturation process. It is hypothesized that bicultural adults are less prone to reactive stress disorders and that the bicultural family is less vulnerable to the intergeneration conflicts, which produce stress for family members and for the family as a social system. Research results have tended to confirm these hypotheses. Bicultural individuals have been found to have lower rates of DSM-III type disorders than monocultural, "American" individuals (Burnam et al., 1987).

Although acculturation measures have both conceptual and methodological limitations, they also have heuristic and pragmatic value for research, and thus, were used in our present project. In doing so, we want to acknowledge several of the problems which limit their utility. First, as noted above, unidimensional acculturation models juxtapose cultures and presuppose that they are truly independent. However, this is not the case. Indeed, it may be just as accurate to hypothesize that Hispanic and Anglophone cultures are fundamentally similar. Frankly, no one has assumed the task of defining precisely how these cultures differ. Rather, cultural orientation has often been measured using behaviors which reflect behavioral expectations of reference groups, or language preferences, rather than substantive culture commitments.

Second, not all aspects of individual cultural orientation change uniformly with increased exposure to a new or dominant culture. Some types of behaviors may be easily learned and accepted but residual behaviors may endure, such as dietary habits, religious beliefs and practices, or culturally conditioned cognitive patterns. In reality, the acculturation process is often very uneven and idiosyncratic. For example, Padilla and Keefe (1980) have reported that ethnic loyalty, or attitudes and feelings about one's culture, descent and ethnic discrimination, tends to endure over time. However, one's cultural awareness, and/or the familiarity with the material and nonmaterial aspects of one's culture, is more likely to erode over time.

Third, there has been a tendency to confound the acculturation process with environmental stress and psychological conflict. For example, the term "acculturative stress", which is commonly used in the literature, engenders confusion by provoking the type of cause-effect tautology discussed by Lazarus and Folkman (1984). That is, it is unclear whether acculturative stress is a cause or an effect of psychological conflict, and moreover, the locus of acculturation stresses cannot be clearly delineated because they involve a large range of qualitatively distinct transactions between individuals and their environments. Equating culture change with psychological dysfunctions often confounds the study of both. Thus, process models must be explicit about conceptual definitions and underlying relationships among independent, intervening and dependent factors.

Procedures for Adolescent Acculturation Scale Development

A central component of the pilot test for our longitudinal study

was the development of valid and reliable measures of cultural orientation, acculturative-related stress, and commitment to cultural values among Hispanic adolescents. In order to illustrate our approach, procedures we used for scale development and validation are summarized below. A four-step process was used to select the final items for the acculturation measure. We began with a list of initial items. A factor analysis was conducted followed by scale construction and reliability assessment and by tests for construct and criterion validity. Final item selection was then made.

In the initial item choice phase, scales and items were assembled from various sources in the literature (Cuellar et al., 1980; Szapocznik et al., 1978; Marin & Sabogal et al., 1987; Rodriguez & Weisburd, 1989). New items were also developed to assess the relevant domains of familism and acculturation-related stresses, such as those related to language problems. Items designed to determine choice of friends and school related behaviors and relationships with those in the non-Hispanic community were also selected. A questionnaire was then constructed and administered to 251 middle school boys and girls representing a wide range of Latin American nationalities and acculturation levels.

In the second step, a series of factor analyses (principal components analysis with varimax rotation) were conducted based on theoretical considerations and the results of previous research. We conducted factor analyses of items grouped first by content area; i.e., language, cultural orientation, acculturation-related stress, familism, and cultural values. Then our analyses were conducted by source of the scale items. For example, Szapocznik's items were analyzed together. We relied most heavily on the results of the factor analyses grouped by content area (i.e., theoretical construct). We relied on the other analyses when the results of the theory-based factor analyses were ambiguous. Factors with eigenvalues of 1.0 or higher were retained as meaningful, and variables with loadings of 0.50 or higher were retained as indicators of the construct being measured.

In the third step, items on each factor were summed to form scales representing each construct. Alpha coefficients were calculated for each scale, and alphas were computed as well for each scale minus those items with the lowest factor loading.

In the fourth step, the construct validity of each of the individual component items in each scale, as well as all of the scales, was assessed by comparing (using T-tests) those who completed the ques-

tionnaire in Spanish with those who completed it in English. Then the results derived from those who were born in Cuba, or Central or South America, were compared (again using T-tests) to those born elsewhere. Finally, the responses to individual items and the overall scales were correlated with the length of time in the U.S. This procedure is illustrated in Table 2.

We found that a preference for English and its use with friends and at school were positively correlated with being born in the U.S., and with taking the questionnaire in English, as well as to longer U.S.

Table 2. Validating Comparisons for Acculturation Scales

	Comparison Variable		
	LANGUAGE VERSION	HISPANIC BORN	HOW LONG IN U.S.
Language	E > S ***	A > H ***	.636 ***
Media Use	E > S ***	A > H *	.433 ***
Language Media	E > S ***	A > H ***	.678 ***
Familism	S > E ***	H > A ***	– .445 ***
Cultural Values	E > S **	---	.219 ***
Family Acculturation Conflict	---	---	.033
Ethnic Loyalty	---	---	.020
Language Related Conflict	S > E ***	H > A **	– .496 ***
Ethnic Awareness	---	---	– .066

Note: * < .05
** < .01
*** < .001

E = English version
S = Spanish version
H = Hispanic born
A = American born

residence if born in Latin-America. The preference for English language media had similar positive correlations with the language version of the questionnaire used and with nativity and time in country as well. For the "familism" component, a lower score indicated a higher degree of importance placed on the family. As expected, "low familism" was associated with use of the English language version, U.S. nativity, and more years in country. Family Acculturation Conflict, Ethnic Loyalty, and Ethnic Awareness were factors not associated with the validating variables listed in Table 2, but they were retained because of their theoretical significance. Language Related Conflict scores were positively related to taking the questionnaire in Spanish, as well as to being born in Latin America, and they were negatively related to length of time in country. Items or scales assessing language, cultural orientation, and cultural values which were not correlated in the hypothesized direction with any of these external criteria were excluded from further consideration.

For purposes of inclusion in a longitudinal study on the predictors of psychopathology, deviant behavior, and drug use, we also assessed the criterion validity of the scales, i.e., the extent to which cross-sectionally, they were related with deviant behavior and/or drug use. This analysis is illustrated in Table 3.

All acculturation scales were correlated with scales of deviant behavior, drug use and perceived friend's drug use. When deciding upon leaving individual items in scales or removing them when the internal consistency analyses were ambiguous, only those items were retained which had high correlations to the criterion variables.

In the last step, final item selections were made. We were limited to the selection of 20-25 items due to space, time, and subject burden considerations. Scales were chosen whose alpha coefficients were at least moderate, 0.5 or higher, and/or which had significant and strong relationships with variables indicating acceptable construct validity. The composition of scales and their alpha coefficients are presented in Table 4.

Conclusion

The current decade will undoubtedly see exciting new research on Hispanic adolescents, including prospective studies such as the one described in this paper. As previously indicated, numerous issues related to the conceptualization and measurement of psychiatric disorders and acculturation remain, and these provide a challenging

Table 3. Correlations Between Acculturation Scales and Criterion Variables

	Comparison Variables		
	DEVIANT BEHAVIOR	DRUG USE	PERCEIVED FRIEND DRUG USE
Language	.250 ***	.147 ***	.133 *
Media Use	.225 ***	.110 *	.088
Language Media	.288 ***	.151 **	.107 *
Familism	−.080	−.119 *	−.046
Cultural Values	.382 ***	.302 ***	.227 **
Family Acculturation Conflict	.326 ***	.198 ***	.100
Ethnic Loyalty	.245 ***	.045	.092
Language Related Conflict	−.074	−.113 *	−.002
Ethnic Awareness	.054	−.039	.010

Note: * < .05
** < .01
*** < .001

research agenda. Certainly no single study can address all of them. Nevertheless fundamental questions about cultural adaptation and adolescent development and their relationships to mental health and social functioning can now be examined within comprehensive theoretical paradigms. And by using prospective study designs, one is able to develop causal models employing latent variable analytical techniques. In short, we can begin to explore many longstanding suppositions and beliefs concerning cultural values and conflicts and to determine their role in offsetting or increasing the psychological and emotional vulnerability of Hispanic adolescents residing in South Florida.

Table 4. Scale Items and Alphas

Language Behavior: (alpha = .817)
- What language do you prefer to speak?
- What language do you speak at school?
- What language do you speak with friends?

Media Use: (alpha = .663)
- In general, in what language are the movies, T.V. and radio programs you like to watch and listen to the most?
- What kind of music do you listen to?

Language media: (alpha = .857)
- What language do you speak at school?
- What language do you speak with friends?
- What language are the magazines you read?
- How much do you enjoy English language magazines?

Familism: (alpha = .698)
- If someone has the chance to help a person get a job, it is always better to choose a relative rather than a friend.
- When someone has serious problems, only relatives can help.
- When looking for a job, a person should find work near his parents, even if that means he loses a good job somewhere else.

Cultural Values: (alpha = .533)
- How important do you think it is to respect your parents' wishes even if you disagree with them?
- How important do you think it is to avoid doing anything that could embarrass your family?

Family Acculturation Conflict: (alpha = .613)
- How often have you had problems with your family because you prefer American customs?
- How often do you get upset at your parents because they don't know American ways?

Ethnic Loyalty: (alpha = .633)
- How often do you feel that you would rather be more American if you had a choice?
- How often do you feel uncomfortable having to choose between Non Latin and Latin ways of doing things?

Language Related Conflict: (alpha = .623)
- How often has it been hard for you to get along with others because you don't speak English well?
- How often has it been hard to get good grades because of problems in understanding English?

Ethnic Awareness: (alpha = .510)
- How often do people dislike you because you are Latin?
- How often are you treated unfairly at school because you are Latin?
- How often have you seen friends treated badly because they are Latin?

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4

Hispanic Immigration and Socioeconmic Status: A Review of Psychiatric Epidemiologic Findings

Cynthia A. Telles, Ph.D.

The relationship of immigration to mental health has been the subject of much interest and debate in the literature. A lack of conclusive empirical evidence is not surprising given the enormous complexity of this relationship. Not only is the accurate measurement of the mental health correlates a formidable task, but Hispanic immigration, itself, is a function of a dynamic and complex interplay of international economic and sociopolitical forces. As such, it is a multifaceted and continuously changing phenomenon whose parameters are difficult to estimate. Nonetheless, it is possible to discern some patterns of significant relationships, which begin to emerge on the basis of cumulative evidence provided by recent epidemiologic studies and of an understanding of their apparent discrepancies. Though these studies do not yield prospective data, which directly measure casaul effects, some preliminary inferences can be made from cross-sectional comparisons of Hispanic subpopulations by immigrant status and generational level.

The voluminous literature on the relationship of immigration and psychiatric disorder in the general population of the United States has been reviewed by others (Favazza, 1980; Locke, 1960; Malzberg & Lee, 1956; and Murphy, 1961). Earlier studies generally asserted that immigrants to the United States compared to natives were more likely to have mental disorder (Murphy, 1961); however, later studies which controlled for sex and age found few differences. Important to note is that most of this early research was based on hospitalization rates with limited generalizability. On the other hand, the midtown Manhattan study, which utilized a large survey with a community population, reported that immigrants who arrived in the U.S. before 1922, prior to the enactment of restrictive immigration laws, had higher rates of mental disorders compared to natives. Yet there were no significant differences between immigrants after 1922 and

natives (Srole, Langer & Michael, 1962). Among the most common explanations for the relationship between immigration and psychiatric disorder is the selection theory, which proposes that a pre-existing disorder increases the probability of migration. Other investigators, however, have interpreted their findings to suggest that the stress of the migration experience precipitates the onset or contributes to the incidence of disorders among immigrants.

Compared to the general literature on the psychiatric epidemiology of immigration, there has been a paucity of empirical data focused on Hispanics. More recently, however, a few significant studies have been conducted which identify some mental health correlates of Hispanic immigration status. Among the most noteworthy are those conducted by Vega and his associates. Vega, Warheit & Meinhardt (1983) conducted an epidemiologic field survey using the Health Opinion Survey and measures of psychiatric symptomatology for the purposes of identifying high risk groups in Santa Clara County. The sample of 1342 adults consisted of recent Mexican immigrants, as well as more acculturated Mexicans and second generation Mexican-Americans and Anglos. Overall, the Mexican origin group had higher symptomatology and dysfunction levels than Anglos, with the monolingual, Spanish-speaking migrants exhibiting significantly greater symptomatology.

Important to note is that the scores of the second generation subsample were significantly lower than those of the Mexican immigrants. In fact, after controlling for socioeconomic status, the scores of the second generation Mexican-Americans were more similar to those of the Anglo subsample. The author concludes that immigrant status and length of time in the United States were associated with the severity of symptomatology.

The relationship of immigrant status to mental health status is very complicated and confounded by socioeconmic status. The Spanish-speaking immigrants had lower educational levels than all other subsamples. In fact, after controlling for ethnicity, age and sex, the data strongly suggest that socioeconomic factors are better predictors than ethnicity of depressive symptomatology. Thus, immigrants appear to be at risk, not only because of the stressful experiences associated with migration, such as multiple losses, language and culture barriers,discrimination, etc., but even more importantly, because of the chronic strain associated with economic deprivation.

An extensive survey conducted by Vega and research associates

(Vega, Valle, Kolody & Hough, 1985) produced the most significant sample of immigrants in a cross-sectional study of depression in the United States. The sample consisted of a cohort of 2157 Mexican women who were immigrants in San Diego County. The most striking finding was the excessively high prevalence of depressive symptoms as reflected by a grand mean of 15.71 on the Center for Epidemiologic Studies-Depression Scale (CSE-D), given that 16 is the customary cutpoint. Almost 42% of the Mexican descent group met the case criteria. As discussed by Vega, et al. (1985), this prevalence is in sharp contrast with those yielded by surveys of the general Anglo-American population usually ranging between 17% and 20%. Among the statistically significant risk factors is the duration of residence in the U.S. with those reporting five or fewer years having the highest mean scores and caseness rates. The data clearly suggest that more recent immigrants are experiencing more stress induced symptoms. Additionally, lower level of education (<5 years), lower income (<$600 a month) and disrupted marital status were significant predictors of depressive symptomatology. In fact, income had greater predictive value than immigrant status. Thus, the results of Vega's study not only provided evidence of the distress associated with migration, but they also underscore the predominant contribution of socioeconomic factors.

Another cross-sectional field survey, which represents the first attempt to conduct large scale binational epidemiologic research, collected data on the prevalence of depressive symptoms among 1,000 person in Tijuana, Mexico. Using the CES-D, Vega, Valle, Kolody and Hough (1986) found a depression caseness rate of 26.4%, which is high relative to rates among most U.S. populations but significantly lower than the rate of the Mexican female immigrant sample in San Diego. This comparison suggests that the higher scores among the latter group reflect the effects of stress associated with immigration, in that the populations are ethnically similar and geographically contiguous. It would be important, however, to partial out the effects of gender before making conclusive statements. Important to note again, is a similar pattern of risk factors, such as: lower socioeconomic status, disrupted martial status, unemployment, and poor health. Once again, the most powerful demographic variable in the prediction of depressive symptoms was socioeconomic status.

The significant contribution of socioeconomic factors to the prediction of depressive symptomatology is confirmed by the results

of other epidemiologic studies conducted in the United States. Burman, Hough and Timbers (1983) compared symptoms of psychological distress among Anglos, Mexican-Americans, Mexicans raised in Mexico but living in El Paso, and Mexicans living in Mexico. As compared to Anglos, the Mexican origin groups reported more severe symptomatology associated with psychological disturbance. Controlling for the effects of socioeconomic status, however, reduced the differences between the four groups. The authors conclude that the ethnic differences associated with psychiatric disturbance were mostly a function of socioeconomic status. No significant differences were found among Mexican-Americans raised in Mexico and those raised in the United States.

Two other surveys of U.S. Hispanic populations fail to analyze the status of immigrants; however, the surveys do underscore the importance of socioeconomic status as a predictor of depressive symptomatology. Frerichs, Aneshensel & Clark (1981) conducted a community survey using the Center for Epidemiologic Studies-Depression Scale (CES-D) on a multi-ethnic probability sample of 1,002 in Los Angeles County, California. The prevalence of depression was greatest among Hispanics and least among Whites, with Blacks and other groups reporting intermediate rates. Furthermore, females were twice as likely to be depressed as males. After controlling for selected demographic and socioeconomic variables, the ethnic differences were not significance. The results are interpreted as suggesting that economic strain experienced by ethnic minorities is significantly related to higher rates of depression for Hispanics.

Roberts (1980, 1981) presented data from two surveys conducted in Alameda County, California, between 1973 and 1974, which suggest that Mexican-Americans have rates of psychological disturbance at least as high as those of Anglos, and that the prevalence of depression may be higher than it is in other groups. Roberts (1984) concluded, after further analysis of the data, that, both in terms of mean scores and "caseness", Mexican-Americans reported significantly higher levels of distress. After controlling for the joint effects of education and income, however, the ethnic difference in mean CES-D scores became non-significant.

The lifetime prevalence of eight major DSM III (Diagnostic Statistical Manual III) disorders was examined as a function of acculturation and immigrant/native status in a large household sample of adults of Mexican ethnic origin (Burnam, Hough, Karno, Escobar & Telles, 1987). The data were collected by the Los Angeles

Epidemiologic Catchment Area Survey, one of the five field studies which composed the collaborative National Epidemiologic Catchment Area Program (E.C.A.). The E.C.A. was initiated by the National Institute of Mental Health to provide the first estimates of the prevalence and incidence of psychiatric disorders based on large-scale epidemiologic surveys in the United States. The Los Angeles study focused on a comparison of the Hispanic and non-Hispanic populations with a total sample of 3,132 adults who were directly interviewed. The methodological details have been described previously (Burnam, Hough, Escobar, Karno, Timbers, Telles & Locke, 1987). This study of acculturation and immigrant status extends previous work by examining specific diagnosable psychiatric disorders rather than symptoms in a large and diversely acculturated household sample.

The purpose of the analyses to be reported was to examine the relationship of acculturation to lifetime prevalence of specific psychiatric disorders and to determine whether the association between prevalence could be completely or partially explained by differences in immigrant/native status. Psychiatric disorder was based on DSM III criteria using the N.I.M.H. Diagnostic Interview Schedule (D.I.S.), a highly structured instrument designed to be administered during interviews by lay persons. Acculturation was assessed with a 26-item scale described by Burman, Telles, et al. (1987). The design included a two-stage, area probability sample of 1,195 adults stratified by catchment area.

Controlling for sex, age and gender, higher acculturation was associated with higher lifetime prevalence rates of phobia, alcohol abuse/dependency, and drug abuse/dependency. Consistent with the acculturation findings, native born Mexican-Americans had higher prevalence rates of disorders compared to Mexican immigrants, including phobia, alcohol abuse or dependency, as well as major depression and dysthymia. After controlling for immigrant/native status, all significant relationships to acculturation were eliminated except for drug/dependency. Previous studies of immigration have confounded these variables. The results of this study suggest that the acculturation process may not directly influence risk for disorders among Mexican-Americans. It appears that immigrant Mexican-Americans have different risks for disorders than native Mexican-Americans for reasons that are partly unrelated to acculturation.

Another more recent analysis of the Los Angeles E.C.A. data examines immigrant status differences in acculturation, strain, social

resources and social conflict to predict differences in depression, as measured by the CES-D between U.S.-born and Mexico-born persons of Mexican descent. Consistent with some of the aforementioned E.C.A. data based on the D.I.S., U.S.-born Mexican Americans had higher CES-D depression scores than those born in Mexico. When social psychological variables (distress, social integration, social support and conflict) were controlled in a multiple regression analysis, the immigrant status difference persisted throughout. Interesting to note is that, in step two of the multiple regression when acculturation and immigrant status were controlled, more symptomatology was reported by the women, the younger respondents, the less educated and those with lower incomes. In step three, those with fewer relatives and the unmarried had higher symptom levels, and, in step four, economic strain and household strain were each strongly associated at the .001 level with depressive symptoms. In this analysis, immigrant status differences persisted even after controlling for all of the variables.

In summary, a major factor affecting the prevalence of psychiatric disorder among Mexican-Americans is immigrant status. The authors interpret this finding to be partially the result of a selection process in which healthier individuals are more likely to immigrate and partially due to elevated rates of disorder among native Mexican-Americans because of frustrated status expectations (sense of relative deprivation). Rates of certain disorders (e.g., substance abuse) also may be elevated due to spending developmental years in conditions of greater stress associated, not only with urban poverty, but with discrimination and cultural conflict in the context of less familial social support and extended support of various kinds. By cultural conflict I am referring to internal identity conflict, intrafamilial conflict and conflict with the larger society. Additionally, earlier exposure to the socializing institutions, such as the school system, may account for some of these differences. In terms of drug abuse/dependency, there is greater availability and usage of drugs in the U.S. inner cities to which natives are differentially exposed at an earlier age.

Compared to the aforementioned surveys, the Los Angeles E.C.A. study appears to yield conflicting evidence, in terms of the association of both immigrant status and mental health status. These discrepancies may be accounted for by differences in site characteristics, methodology and the nature of the psychological phenomena being assessed. Most of the E.C.A. data on Hispanics were collected from a catchment area, which contains a relatively high density of

Hispanics who comprise a well established and politically organized community. It appears that other surveys obtained samples with a proportionately greater number of recent immigrants and persons in lower levels of income and education. Furthermore, one could expect that the distribution of respondents along the acculturation continuum was different in the E.C.A. sample compared to the samples obtained in other surveys.

Differences in data analysis may also account for some differences in the reporting of the relationship of acculturation and immigrant status to mental health status. For example, in the Vega et al. (1986) study, the association between more recent immigrant status and higher CES-D scores was only significant for the first five years following immigration. In the E.C.A. analysis, immigrant status was treated as a dichotomous variable. Finally, it is important to note that the data reported in the E.C.A. study were collected with the Diagnostic Interview Schedule and data reported in most other studies were based on the CES-D. These instruments assess different psychological phenomena with the former yielding diagnosable psychiatric disorder and the latter providing information about symptoms of distress and demoralization that are more subject to situational stress. Additionally, from a methodological point of view, in comparing the E.C.A. protocol to those of other studies, the CES-D was administered as part of a very lengthy protocol after the Diagnostic Interview Schedule. It is unclear what biasing effect this difference may have produced. There is clearly a need for a more standardized analysis of various data sets using similar demographic controls.

A review of these recent epidemiologic studies reveals an apparent discrepancy, in terms of the immigrant generation most at risk for the deleterious mental health consequences of immigration. It is important, however, to conduct further research which elucidates the meaning of these differences. For example, while immigrants may be at greater risk during the first few years after immigrating for symptoms of acute distress and demoralization associated with the interaction of immigration and poverty stressors, the subsequent acculturating generations may be at greater risk for developing psychiatric disorders, such as substance abuse/dependence, as a function of differential exposure to U.S. culture and socializing institutions and other stressors associated with urban poverty, minority group status, culture conflict and a relative lack of social support during their early developmental years.

More research in general is needed to tease apart these complex

relationships. It will be important to partial out the effects of important mediating variables from those directly related to the migration experience. Among the variables related to the heterogeneity of the Hispanic immigrant population which affect psychosocial adaptation are: (1) economic, social and educational status; (2) personality adaptation and coping resources; (3) the extent to which the conditions motivating the migration were stressful (e.g., war, persecution); (4) the extent to which the migration was involuntary and unwanted (e.g., refugees); (5) the degree to which returning to the county of origin is not optional (e.g., exiles); (6) the degree to which the economic and sociopolitical conditions in the host country create an unfavorable climate for immigrants, particularly if not documented; and (7) the quality of the diplomatic relations between the governments of the donor and host countries and their effect on the receptivity toward immigrants, particularly refugees.

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5

Psychiatric Conditions Among Puerto Ricans: Are They More Prevalent Than In Other Ethnic Groups?

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For years, psychiatric epidemiology studies have revealed distressing statistics suggesting that the prevalence of mental health problems among the Puerto Rican population in both the United States and the island is excessively high relative to that of other ethnic groups (Dohrenwend, 1986; Guarnaccia et al., 1990; Haberman, 1976; Strole et al., 1962;). Several methodological and substantive explanations have been given for this apparent high rate of mental distress among our population, such as: (1) the majority of Puerto Ricans (both mainland and islanders) are socioeconomically disadvantaged, rendering them vulnerable to mental disorders (Rogler et al., 1989); (2) the alienation and prejudice suffered by most Hispanic Americans, coupled with migration stress, also renders them vulnerable to mental distress; (3) most studies have used psychodiagnostic instruments which lack validity and cultural relevance (Malgady et al., 1987); (4) differences in response style and the use of different cultural connotations to desirable behavior (Dohrenwend & Dohrenwend, 1969) increases symptom reporting in our population.

Studies of Island Puerto Ricans

The vast majority of the above quoted epidemiological studies used symptom scales to determine psychiatric morbidity, and it remained unclear whether the higher rates were due to a true higher prevalence of psychiatric disorders among the Puerto Rican population, or whether the high rates of symptoms reflected cultural patterns of stress or distress. More recently psychiatric morbidity was ascertained using a diagnostic interview (Diagnostic Interview Schedule, DIS) which measured psychiatric disorders based on the American Psychiatric Association Diagnostic Statistical Manual III (DSM III). Prevalence rates for island Puerto Ricans for most specific psychiatric disorders studied did not differ significantly from those of

other ethnic groups (Canino et al., 1987a). Although the results of this study may seem contradictory to the vast majority of the previous epidemiological studies, as Rogler et al. (1989) point out, it is possible that the conclusions of both types of studies are correct and that Puerto Ricans may indeed report more psychiatric symptoms, yet evidence DSM-III prevalence rates which are similar to those of other ethnic groups. Rogler et al. (1989) also point out that this interpretation is purely speculative and that future investigations with probability samples of Hispanics and non-Hispanics whites should include the administration of both symptom checklists and structured interview schedules.

We have recently attempted to answer empirically this speculation by comparing both rates of psychopathology and symptom levels in community samples of Hispanics and non-Hispanic groups from the Los Angeles Epidemiologic Catchment Area Study with island Puerto Ricans (Shrout et al., 1992). Hispanics from Los Angeles were further classified into those born in Mexico (immigrant Mexican-Americans) and those born in the United States (Native Mexican-Americans). The data from these analyses were obtained from the Los Angeles Epidemiologic Area Study (Karno et al, 1987) and the Puerto Rican adult epidemiologic survey (Canino et al, 1987a). Both studies used probability population samples and the DIS to measure specific psychiatric disorders. Symptom levels were determined by empirically defined DIS symptom scales developed by Rubio-Stipec et al. (1990). The study is important because of the fact that differences in population rates of disorders or symptoms were accounted for by controlling for possible differences in sample composition among the groups. That is, all statistical analyses controlled for sex, age, educational level, number of people in the household and zone of residence. This was considered essential since prevalence rates of psychiatric disorders have been found to vary in relation to the above demographic factors (Robins et al., 1985; Canino et al, 1987a).

The results reported by Shrout et al. (1992) indicated that Mexican-American immigrants had the least psychiatric disorders and symptom levels as compared to all other ethnic groups. Puerto Ricans had lower prevalence rates of major depression and alcohol abuse and dependence but higher rates of somatization disorder and somatic symptoms. Anglos or Non-Hispanic whites, as well as Native Mexican-Americans, had higher rates of major depression, depressive symptoms, and alcohol abuse and/or dependence, but less

somatization, as well as somatic symptoms, compared to Puerto Ricans.

How can we then explain the fact that these recent studies did not confirm prior research? Puerto Ricans did not exhibit (except for somatization) higher rates of psychiatric disorders or symptoms compared to other ethnic groups. If we examine the four explanations given previously for the supposed higher prevalence we may find the answer. First, in both the Puerto Rico and the Los Angeles studies, the psychodiagnostic instrument used was previously tested in the particular Hispanic populations (Burnam et al., 1983; Canino et al., 1987b;), thus reducing bias due to inadequate instrumentation for the measurement of mental disorders in the population and precluding the possibility of response styles affecting the results. Second, the comparison of different Hispanic groups with Anglos, while at the same time controlling for socioeconomic, age and sex differences in the sample composition, reduced the likelihood that differences in prevalence rates could be explained by sample composition. Finally, island Puerto Ricans are not subjected to the prejudice and alienation, or to the migration stress experienced by mainland Puerto Ricans or other minority groups.

The results of the analyses reported by Shrout et al. (1992) also revealed that no particular ethnic group was at greater risk for psychiatric disorders in general. If anything, the immigrant Mexican-Americans were at less risk than any other group possibly because of a selective migration process. It is possible that "robust or healthy" Mexican-Americans are the ones who can successfully migrate to the United States (Burnam et al., 1987). Furthermore, the risk for disorders varied by specific psychiatric disorder or syndrome and by ethnicity. Of interest was the fact that Puerto Ricans only scored higher than the other ethnic groups in somatization disorder and somatic symptoms, a finding reported as well in other analyses of the same data set (Canino et al., 1987a; Escobar et al., 1989; Canino et al., 1992).

Studies of Mainland Puerto Ricans

But what about mainland Puerto Ricans? Are they at higher risk for mental disorders or distress as compared to other ethnic groups or to island Puerto Ricans? Recently, Guarnaccia et al. (1990) reviewed the literature of epidemiological studies of Puerto Rican mental health with particular emphasis on mainland Puerto Ricans. In this review, Guarnaccia et al. (1990) attempted to answer two

main questions: Why do Puerto Ricans report more symptoms than other groups? and, Is the higher rate of symptoms a result of greater pathology or of response style?

We have already provided evidence (Shrout et al., 1992) that island Puerto Ricans do not report higher psychiatric symptoms (except for somatization) compared to other ethnic groups. Furthermore, no evidence was found of a response style bias among this group. In contrast, the evidence so far for mainland Puerto Ricans points towards an opposite trend. The results of Guarnaccia et al. (1990) indicated, that, for the most part, in most studies in which Puerto Ricans from the United States were compared to other ethnic groups, the latter reported higher rates of psychiatric symptoms or distress. Salient among all the studies quoted was a recent comparison of mainland Puerto Ricans with other Hispanic Americans. Moscicki et al., (1987) in analyzing the *Hispanic Health and Nutrition Examination Survey* (HANES) data reported significantly higher rates of major depressive episode and depressive symptoms among New York Puerto Ricans compared to other Hispanic groups in the United States. These rates remained significantly higher even after controlling for socio-demographic characteristics. The prevalence rates of major depressive episode among mainland Puerto Ricans were significantly higher (more than double) than those reported by Canino et al. (1987a) for island Puerto Ricans. Since the same diagnostic instrument (DIS) was used in both the island and mainland study, differences in rates could not be explained by differences in either instrumentation or diagnostic criteria. This finding is particularly interesting, if we consider that Shrout et al. (1992) indicated that island Puerto Ricans had significantly lower rates of major depression and depressive symptomatology, as compared to the other ethnic groups studied.

Various factors could explain the higher rates of depressive symptoms and disorder found among mainland Puerto Ricans. Guarnaccia et al. (1990) posit that recent analyses of the same data set of the *HANES* have revealed consistent differences in the way Hispanics conceptualize depression, thus raising questions about the validity of traditional assessment of the symptoms of depression in cross-cultural studies. Thus, Guarnaccia et al. (1990) question the validity of the nosological system in which the instruments (whether DIS or CES-D) are based. Although this is a valid assumption, it does not explain why mainland Puerto Ricans have almost double the rate of island Puerto Ricans in both depressive symptoms and major

depressive episode. It would seem unlikely that mainland Puerto Ricans hold a significantly different conceptualization of depression than island Puerto Ricans. A more plausible explanation given by Guarnaccia et al. (1990) is related to the social stress hypothesis. Mainland Puerto Ricans exhibit higher rates of unemployment, low income, and marital disruption than either Mexican Americans or Cuban Americans in the United States.

Consistent with this social stress hypothesis posited by Guarnaccia et al. (1990) is the possibility that mainland Puerto Ricans exhibit higher rates of depression or psychiatric symptoms because of selective migration. Island Puerto Ricans of marginal mental health, or at higher risk because of their low socioeconomic status, may be more likely to migrate to New York. This coupled with the alienation, prejudice and migration stress which many Puerto Ricans experience in the U.S. may render them more vulnerable to psychiatric disorder and symptoms. Recent evidence provided by Vera et al. (1991) supports the hypothesis of a selective immigration particularly regarding the migration of low socioeconomic status Puerto Ricans to the U.S. In this population study, low-income island Puerto Ricans were compared to the New York *Hanes* Puerto Ricans with respect to depressive symptoms as measured by the CES-D. Results showed that low-income, island Puerto Ricans had similar rates of depressive symptomatology compared to New York Puerto Ricans. Gender, low educational level, low household income and unemployment were found to be predictors of high depressive symptoms for both samples. Thus, these results are consistent with the hypothesis that high levels of at least depressive symptoms among Puerto Ricans are mostly explained by socioeconomic status.

Conclusions of Epidemiologic Studies

The review of the most recent epidemiologic studies, in which rates of either psychiatric symptoms or disorders among island Puerto Ricans were compared to other ethnic groups, indicate that no significant differences among ethnic groups were observed when demographic differences among the groups were statistically controlled and the psychodiagnostic instruments were tested in the culture of origin. Salient among the findings was the fact that island Puerto Ricans reported high prevalence rates of somatic disorders and symptoms and lower rates of depressive disorders and symptoms, even after controlling for socio-demographic correlates.

Findings from other Latin-American cultures confirm those

obtained in Puerto Rico, since patients from Colombia and Peru (Mezzich and Raab, 1983; Escobar et al., 1983), as well as Hispanics in United States communities (Dohrenwend & Dohrenwend, 1969), have shown a tendency to present high levels of unexplained physical complaints. Several explanations have been given for these higher rates of somatic symptoms found among Hispanics. Kirmayer (1988) has stated that Hispanics have a different way of comprehending illness which eliminates the mind/body dualism inherent in other cultures. Koss (1990) argues that among Hispanics the psychological and physical is one state, intertwined in experience (with neither dominating) and that bodily complaints act both as symbols and as signposts pointing to social and interpersonal distress. Others (Kolody et al., 1986) have stated that somatic symptoms among Hispanics may be masking depressive symptomatology. Yet the findings of Rubio-Stipec et al. (1990) do not seem to support this hypothesis. In that study, factor analyses of the DIS symptoms revealed a somatization factor, which was distinct and independent from the depression factor.

While somatic symptoms are more prevalent among island Puerto Ricans, depressive symptoms and disorders are less prevalent as compared to either mainland Puerto Ricans or other ethnic groups including Anglo-Americans. It is possible that this lower prevalence of depression among island Puerto Ricans may be related to the high levels of social, community and family support reported by the population (Bravo et al., 1991b). Social and family support have been found to serve as buffers against depression (Brown & Harris, 1986). The breaking of support networks with migration might be one of the factors placing mainland Puerto Ricans at greater risk of depressive symptoms.

In conclusion, we may state that possibly a combination of factors explain the higher prevalence of mental health problems exhibited among mainland Puerto Ricans. A selective migration process placing immigrants of lower socioeconomic status at greater risk for psychiatric disorder; the disruption of social and family systems; the alienation and prejudice experienced by this group in the U.S.; and finally the stress of the migratory process, per se, are all factors which possibly contribute to a higher rate of mental disorder or symptoms among this population.

We can therefore conclude that there is no hard evidence in favor of the contention that either mainland or island Puerto Ricans are at higher risk of psychiatric disorders or symptoms because of any

inherent aspect of their culture. Yet this does not mean that culture does not influence the manifestation or occurrence of psychiatric disorders. Several limitations of the above mentioned epidemiologic studies do not make them the best source for the study of culture specific syndromes. In particular, the cultural sensitivity of the psychodiagnostic instruments used and the lack of concurrent ethnographic research constitute significant limitations.

Are Diagnostic Instruments Used in Epidemiologic Research Culture Sensitive?

The fact that very few differences were identified regarding the prevalence rates of psychiatric disorders or the mean number of symptoms associated with these disorders, in the comparison of island Puerto Ricans with other ethnic groups, does not mean that the issue of cross-cultural differences in psychopathology has been settled. The fact that the reliability and validity of an instrument like the DIS have been tested in the host culture (Canino et al., 1987b; Bravo et al., 1991a) does not necessarily assure complete cultural sensitivity of the instrument. The validity of DSM III diagnostic categories has not been assessed in Hispanic populations, and the DIS is based in this nosology. It is possible that in using DSM-III, which was developed for use among Euro-Americans in the United States, we are imposing an artificial cultural homogeneity in the prevalence of mental disorders and symptomatology. Kleinman and Good (1985) have stated that one of the consequences of the "category fallacy" is the appearance of cross-cultural homogeneity which is artifactual to the use of a constricted nosology.

But how can a category fallacy in cross-cultural research be avoided? The answer is not simple if it is considered that, for the most part, the validity of the majority of diagnostic categories has not been established even for the culture for which the nosology was developed. Researchers and clinicians are still struggling with defining a "gold standard," or the best criterion to use as an external validator for establishing the validity of psychiatric diagnoses (Robins, 1985).

The fact that this is the state of the art in mainstream psychiatry does not mean that there is nothing to be done in cross-cultural research to diminish cultural bias or to increase the cultural sensitivity of the instruments used. The use of a culturally sensitive translation and an adaptation process which involves ethnographic methods; the inclusion of indigenous categories of experience; the

testing of the psychometric properties of the instrument in the host society; and the inclusion of indigenous researchers in the investigative team, are methods used in culturally sensitive research which can diminish cultural bias (Rogler, 1989).

Translation and Adaptation of Instruments

Kleinman (1987) has stated that translation is the very essence of ethnographic research. Multiple linguistic and sociocultural factors must be considered. To a certain extent the epidemiologic studies of island Puerto Ricans used a translation and adaptation model based on various methods (Flaherty, 1987; Brislin et al., 1973; Gaviria et al., 1984), which evaluate the cultural equivalency of the research instruments in five dimensions: semantic, content, technical, criterion and conceptual. This process has been described in detail elsewhere (Bravo et al., 1987; Canino et al., 1987b). Nonetheless, problems were encountered in certain concepts that were difficult to translate; for example, idiomatic expressions or particular ways a culture has of expressing internalized emotions such as "feeling blue or down", "feeling high", etc. Other difficulties which emerged included measuring with reliability some of the DSM III time related criteria; re-phrasing complex questions which were difficult to understand for low socioeconomic status subjects; and measuring psychotic symptomatology, like delusions and hallucinations, which are more common among persons of certain religious beliefs and among practitioners of spiritualism and santeria (Guarnaccia et al., 1992).

Although the results of the testing of the psychometric properties of the Spanish DIS used in Puerto Rico (test-retest reliability and concordance with clinical diagnosis) (Canino et al., 1987b) were similar to those obtained in the U.S. (Robins et al., 1982), poorer concordance between DIS internalizing disorders, such as obsessive compulsive disorder, schizophrenia and dysthmia, and the clinical judgement of indigenous psychiatrists was salient in the island. An attempt was made to resolve this difficulty by analyzing prevalence rates with and without modification to the algorithms of the DIS for dysthymia and obsessive compulsive disorder so that they could reflect the Puerto Rican cultural context (Canino et al., 1987a). In addition, the clinical editing of the schizophrenia section of the DIS (Guarnaccia et al., 1992) and the ethnographic analysis of the verbatim descriptions of symptoms and events of island respondents were carried out.

Ethnographic Analysis

One limitation of the majority of epidemiologic studies quoted has been the lack of adequate ethnographic information prior to the field work, which could permit the measurement of possible "culture specific syndromes" or particular ways populations may have of expressing certain psychiatric symptomatology. Ethnographic techniques were used by Guarnaccia et al. (1989) to analyze verbatim expressions of some DIS items in the Puerto Rico epidemiologic survey. As a result of these analyses, it was found that a number of persons who reported having a panic attack in their verbatim response to question 62 of the DIS, often expressed experiencing an "ataque de nervious". This has been described by investigators (Guarnaccia et al., 1989; De La Cancela et al., 1986) as a dramatic episode in which persons of Hispanic origin tremble; feel heart palpitations and other somatic symptomatology; begin to shout; sometimes become aggressive; and then fall on the floor unconscious. An "ataque de nervios" scale was developed with the somatization items of the DIS which resemble the cluster of symptoms typical of the syndrome (Guarnaccia et al., 1989). The reliability of the scale was tested and the number of people in Puerto Rico who scored high in the scale was estimated and their demographic and diagnostic characteristics were also described.

In a second epidemiologic survey of the island performed in 1987 by Canino and colleagues, prompted by Dr. Peter Guarnaccia, an item was added to the DIS which asked the respondent whether they had ever experienced an "ataque de nervios" and a verbatim description of the symptomatology and precipitating factors was obtained. Analyses of the data revealed that 12% of the population reported having experienced a "nerve attack" once in their lifetime and that more than half of these also met criteria for either a depressive or anxiety disorder (Guarnaccia, 1991). The Puerto Rico team is now in the process of analyzing in more detail these results with Dr. Peter Guarnaccia, in order to determine with empirical epidemiologic evidence, whether "ataques de nervios" are a true culture-bound psychiatric syndrome, or are merely a cultural idiom of common people for describing some cultural manifestations of episodic psychiatric conditions, such as anxiety or depression. Future research in this area will involve revisiting this 12% of the population who reported a "nerve attack" and performing a complete ethnographic description of the "attack"; the development of a scale to more adequately

measure these symptoms or syndrome; and a complete clinical evaluation of this sub-sample by indigenous psychiatrists to determine the presence or absence of specific psychiatric diagnose.

Suggested Direction For Future Hispanic Research

Methodological and Ethnographic Research.

Combining ethnographic and empirical epidemiological approaches is essential, in order to better define what constitutes a case, particularly when using a psychiatric nosology which was developed for another culture. Ethnographic research can also offer plausible explanations for some surprising findings. For example, in both the 1985 children's survey of Puerto Rico (Bird et al., 1988), and in the 1987 adult survey (Canino et al., 1993), the prevalence of drug addiction in the children, adolescent and adult populations was found to be less than 2%. Furthermore, the prevalence of conduct disorder in children and of antisocial personality in adults was less than one percent of these respective populations. These very low prevalence rates of drug addiction, antisocial personality and conduct disorder in the Puerto Rican population run counter to the fact that the island has one of the highest crime rates in the nation and one of the highest incidence rates of drug related AIDS in the world. Ethnographic research which would investigate the response styles of this population with respect to inquiries concerning illegal behavior would be useful for the interpretation of these results. Furthermore, methodological studies in which different methods of ascertainment are used for assessing stigmatizing behaviors would be necessary.

Cross Cultural Comparisons.

One way of reducing ethnocentrism and of disentangling substantive from methodological issues is by comparing epidemiological results across different cultures in which similar instruments and methods were used. We have seen how in the field of adult psychiatric epidemiology these comparisons have been useful (Helzer et al., 1990). The field of child psychiatric epidemiology has also begun to make cross-cultural comparisons with the similar finding that the prevalence of most DSM III psychiatric disorders does not vary across cultures. We need to do more of these comparisons, particularly with South American countries and Spain which share with U.S. and island Puerto Ricans and other U.S. Hispanics a common heritage. The merging of population data sets of island Puerto Ri-

cans, mainland Hispanics, South Americans, and other ethnic groups from other countries, which have been assessed by the same diagnostic instruments, would be essential. This would permit us to begin to disentangle the extent to which societal context and culture influences the prevalence and correlates of mental disorders and the extent to which genetics may play a role. The inclusion of ethnographic work prior to the epidemiological field survey would be of great value, in order to ascertain whether prior commonalities found in cross-cultural epidemiological research are the results of a "category fallacy".

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6

Factors Associated with Psychological Distress Among Mexican-American and Anglo Populations Residing in a Border City

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Existing literature concerning Mexican-American psychological distress can be subsumed under either the minority status or ethnic culture perspective (Mirowsky & Ross, 1980). The former view contends that so-called ethnic variations in incidence of psychological distress (e.g., Anglo vs. Mexican-American) is an artifact of the tendency for minority persons to disproportionally hold membership in the under class. In this view, socioeconomic status (SES), rather than ethnicity, is the important determinant of psychological distress. According to the ethnic culture perspective, psychological distress is one manifestation of a particular type of ethnic culture. Representative of this view is Mirowsky and Ross's (Mirowsky & Ross, 1984) assertion that fatalism, as a Mexican cultural trait carried over in Mexican-American populations, leads to a relatively high incidence of depression. According to these authors, another Mexican cultural trait, strong familial and friendship support, tends to protect Mexican-Americans against anxiety. Elsewhere (Heller, et al., 1990) in a more theoretical paper, we have developed and tested an analytic path model that attempts to place the minority status versus ethnic culture debate concerning psychological distress in broader perspective.

In this work we report findings from a more straight forward multiple regression analysis that assesses comparative strengths of the variables, Anglo versus Mexican-American ethnicity and SES, as predictors of depression and anxiety. After this assessment, ethnicity

and SES are entered into multiple regression equations along with a number of mediating and control variables gleaned from relevant literature. Through this type of analysis, it is possible to ascertain the strength of each variable as a predictor of psychological distress after controlling for effects of all other variables in a theoretical framework. Each variable is discussed, along with a brief summary of research findings related to its possible effects on psychological distress.

Ethnicity and Socioeconomic Status

Existing research literature is unclear regarding the relative incidence of psychological distress among Anglo and Mexican American populations. A majority of studies have concluded that the psychological distress is not a major Mexican American problem. These studies (Antunes et al., 1974; Burnam et al., 1984; Mirowsky & Ross, 1980, 1984; Quesada et al., 1978; Ross et al., 1983a; Ross et al., 1983b) show either a lower incidence of psychological distress among Mexican Americans, in comparison with Anglos, or no significant differences in distress symptoms. Related findings from Burnam et al. (1987) show that Mexican immigrants to the United States possess relatively low levels of psychological distress.

Opposite findings have been presented (Burnam et al., 1983) where Anglos were found to report fewer distress symptoms. Others also have found rates of psychological distress among Mexican Americans equal to or higher than those reported for Anglos (Roberts, 1980; Roberts, 1981; Roberts & Vernon, 1984). These authors believe that many of the studies finding a low incidence of psychological distress among Mexican-Americans are biased, in terms of scoring procedures used in tabulating distress scales. According to Roberts and Vernon (1984), alleged ethnic differences in psychological distress are largely a function of social class.

Studies concerning the relationship between SES and psychological distress have almost invariably found an inverse relationship between SES and a tendency towards psychological distress (Boyd & Weissman, 1982; Dohrenwend & Dohrenwend, 1974; Eaton, 1980; Hirschfield & Cross, 1982; Roberts, 1984; Roberts et al., 1982). If SES constitutes the decisive factor in psychological distress, one would think that under-class Mexican-Americans would possess a high degree of this attribute. In addition to poverty, Mexican-Americans are subjected to prejudice, discrimination and linguistic barriers (Cockerham, 1989). Thus, the above-cited cultural argument

by Mirowsky and Ross (1984) would be rejected by researchers subscribing to the minority status perspective.

Mediating Variables

Fatalism, the opposite of perceived environmental mastery, is frequently seen as a contributing factor to psychological distress. *Mastery* is defined as a feeling of personal competence of ". . . effectiveness in dealing with and overcoming the problems of life" (Mirowsky & Ross, 1984, p.2.). Mastery is considered to be one prerequisite of good mental health, because a fatalistic orientation breeds passivity in the face of environmental problems (Dohrenwend & Dohrenwend, 1970). According to Mirowsky and Ross (1989), a lack of mastery (powerlessness in their terminology) can affect psychological distress directly or indirectly. Passivity towards negative life events directly leads to increased distress because this orientation impedes coping. Indirectly, fatalism can influence distress by inhibiting one's will to make a decision or to seek out potential sources of help.

Another variable that has been widely linked to psychological distress is *social support* and/or institutional support. Possession of a support network is either said to directly reduce one's probability of having to endure psychological distress (Brim et al., 1982; Cohen & Wills, 1985; Pittman, 1988; Procodano & Heller, 1983; Williams et al., 1981), or to serve as a buffer (Antonovsky, 1974; Cohen, 1985; Husaini et al., 1982; Kaplan et al., 1983; LaRocco, 1980; Myers et al., 1975; Pearlin et al., 1981; Wheaton, 1985) for those undergoing a series of negative life events. It has been suggested, however, that intense networks of familial and peer support may or may not decrease psychological distress. Mettlin and Woelfel (1974) note that interpersonal influence can be stressful in itself because of the volume of influence originating from several sources. Corse, Schmid and Trickett (1990) support this view with findings that abusive mothers tend to have troubled relationships with relatives. Further, Cohen and McKay (1984) suggest that specific support domains must be related to specific effects. Emphasized in our research is the concept of *meaningful network of support*. By "meaningful" network we refer to institutional, familial and friendship involvements that can be relied upon during actual occurrence of a stressful life event. Meaningful support involves a broad non-intense network of friends, relatives, and/or institutions that can be called upon for the satisfaction of specific needs.

Life-stress

Life-stress constitutes another widely cited contributor to psychological distress. The role of life stress as a determinant of psychological distress has been studied extensively (Cockerham, 1989; Pearlin et al., 1981; Ross & Mirowsky, 1979; Thoits, 1981). General agreement exists that an accumulation of stressful life events tends to adversely affect mental health. Although effects of life stress on psychological distress are usually considered in relation to support (Cockerman, 1989; Mirowsky & Ross, 1989), life stress is addressed in this research as a possible mediating variable in the relationship between ethnicity, and/or SES, and psychological distress.

Although not found in existing literature, *lack of money to purchase necessities* (or financial hardship) is certainly a determinant of psychological distress. Inability to afford such necessities as acceptable housing, an automobile, food, clothing, and medical care places a considerable psychological strain on an individual. For this reason, financial hardship is included as a potential mediating variable in this study.

Finally, the variables age and gender have been found to influence psychological distress. Age and gender are included in this study as control variables. Women tend to possess higher rates of psychological distress than men (Clancy & Gove, 1974; Kessler et al., 1981; Weissman, 1979). Elderly persons tend to possess relatively high rates of depression, but age has not been found to correlate with anxiety (Mirowsky & Ross, 1989).

To summarize, the focus of this research is on the relative ability of the minority status and ethnic culture perspectives to explain the incidence of generalized depression and anxiety in Anglo- and Mexican-American populations residing in a United States border city. Results from step-wise multiple regression analyses will be presented and discussed. Initially, relative effects of ethnicity and SES on depression and anxiety will be examined. This examination will be followed by an assessment of the potency of ethnicity and SES as explanatory variables after potential mediating and control variables are entered into analyses. Results will then be assessed in terms of their clinical implications for mental health practitioners.

Methods

A stratified random sample of 806 respondents residing in El Paso, Texas was selected and interviewed during 1985-1986. The

sampling procedure consisted of selecting census tracts varying in median income and ethnic composition. A scarcity of upper-middle-class Hispanic and under-class Anglo census tracts necessitated some deviation from randomness. A combination of random and quota sampling was devised for these numerically under-represented groupings. Respondents refusing to be interviewed and "not-at-homes" (after three call-backs) comprised eight and 12 percent respectively of the original sample. These households were replaced by others within the same city block by means of a random replacement procedure. In accordance with conventional selection goals of population researchers (Kish, 1965; Babbie, 1973), five households per randomly selected block were interviewed. Every attempt was made to insure representative samples of Mexican- and Anglo-American respondents. In all, on the basis of self classification, life history questions, and interviewers' independent assessments, 783 of the 806 respondents could be unambiguously classified as Mexican or Mexican-American (n = 446) or Anglo-American (n = 337). The 23 unclassifiable respondents have been excluded from statistical analyses.

Data were collected by means of structured face-to-face interviews. The interview schedule was originally written in English and subsequently translated into Spanish by means of a cross-translation procedure. Interviews were conducted in Spanish or English according to respondent's preference.

Variable Measures

The two psychological distress variables (depression and anxiety) were measured by published scales that have been well-received by survey researchers in the area of mental health. Psychological depression (depressive symptomatology) was measured by the CES-D scale, a 22-item scale developed by the Center of Epidemiological Studies, National Institute of Mental Health. The scale has been well tested (Radloff, 1977) and extensively used (Roberts, 1981). These 22 depression items formed a highly reliable scale among the El Paso sample, achieving a Cronbach's *alpha* of 0.924. Anxiety was measured by a factor analyzed symptom index developed by Ilfeld (1979). Cronbach's *alpha* for this scale among the El Paso sample was 0.821. Respondents were asked how frequently they had experienced 11 anxiety-related symptoms during a seven-day period prior to interview.

Two independent, four mediating and two control variables appear in multiple regression analyses reported in Table 2 and

Table 3. The study's two major independent variables are ethnicity and SES.

Ethnicity and Socioeconomic Status

A number of authors (Mirowsky & Ross, 1984; Olmedo, 1978; Yancy, 1979) suggest that Mexican-American ethnicity is a continuous rather than discrete variable. In agreement with this position, "Mexican" *ethnicity* has been defined as a person's degree of involvement in "Mexican things". A Mexican acculturation scale was constructed from factor-analyzed items developed by Cuellar, Harris and Jasso (1980). Ten scale items measure degree to which certain activities and events are important, such as Mexican songs, fiestas, culture, and sports. Scale scores can range from zero (Anglos and Mexicans/Mexican-Americans who are culturally Anglo) to 40 (Mexicans/Mexican-Americans who are strongly immersed in Mexican culture). Scale items (multiplied by their factor loadings) are summed. Cronbach's *alpha* for this scale is 0.962. Degree of formal education and yearly family income have been combined to form a SES scale. Z-scores were computed for education and income prior to combining the two variables.

Mediating and Control Variables

The mediating and control variables are life stress, financial hardship, perceived environmental mastery and possession of meaningful support comprise the study's mediating variables. Life stress is measured by 23 questions related to non-health and health-related stressful life events taken from Thoits (1981). Respondents were asked if any of these events had occurred within a period of approximately one year prior to interview. Events are summed to give respondent's life-stress score (Thoits, 1981). Financial hardship is measured with questions concerning nine economic strains typically experienced by adult individuals (Pearlin, 1981). These questions deal with difficulty reported in being able to afford such things as housing, household equipment, an automobile, food, medical care, clothing, and leisure activities; the ability to pay one's bills; and respondent's general assessment of his or her financial situation.

Perceived environmental *mastery* is measured by a seven-item scale developed by Pearlin et al. (1981). These items measure the extent to which respondents see themselves as being able to control forces affecting their daily lives. Responses to these items range from "strongly agree" to "strongly disagree", with no "undecided" category included in the response format. Response codes run from

1 through 4, with "4" representing the highest promastery response to a particular statement. Cronbach's *alpha* for the mastery scale is 0.780. Originally social and institutional support were to be included in the model as separate variables. The two measures, however, correlated sufficiently to present problems of colinearity during multiple regression analyses. Thus, the two scales were combined into one general *meaningful support* scale after z-scores were computed for each. Respondents were read five statements dealing with loss of income and hospitalization of spouse over a several week period. Statements dealt with the extent to which respondent would possess familial, friendship and/or institutional support during such stressful periods. Responses to these statements were numerically coded as (1) "This statement in no way fits my life today;" (2) "This statement somewhat fits my life today;" and (3) "This statement strongly fits my life today." Responses from these five statements have been summed to form a general support score for each respondent. Respondent's age and sex are included in multiple regression analyses as control variables. Age is coded as given. Sex is coded in dummy form (female = 1; male = 0).

Data Analysis

Data are analyzed through a step-wise multiple regression analysis for depression and anxiety. Scales and other variable measures are brought into the step-wise analysis in three blocks. In the first block, ethnicity and SES are regressed on psychological distress (depression in Table 2, anxiety in Table 3). Added to these in the second block are life stress and degree of financial hardship. In the third block, all eight of the independent, mediating and control variables are regressed on psychological distress. This procedure allows an initial comparison of the relative predictive power of ethnicity and SES on psychological distress before and after combined effects of mediating and control variables are added to the equation.

Results

Correlation coefficients, means and standard deviations are presented in Table 1. Summarized in Table 2 and Table 3 are results from stepwise multiple regression analyses concerning depression and anxiety. These latter tables include unstandardized and standardized regression coefficients (after controlling for effects of other variable(s) entered within the same block) and the square of the multiple correlation coefficient (R^2) for all variables included in a given block. Discussion of results summarized in these tables will focus on

ethnicity and SES as potential determinants of depression and/or anxiety.

Results shown in Table 1 indicate that, at the bivariate level, depression and anxiety correlate more highly with SES than with ethnicity. Correlation coefficients between SES, depression and anxiety are −0.346 and −0.219 respectively. Corresponding coefficients for ethnicity are 0.231 and 0.130. Correlation coefficients in Table 1 also show that, with the exception of life stress, each of the mediating variables correlates more highly with SES than with degree of Mexican acculturation. Higher status persons tend to possess a relatively low degree of economic hardship, a relatively high degree of meaningful social and institutional support, and a perception of mastery over their environments. Degree of Mexican acculturation, however, also correlates in a meaningful way with economic hardship, possession of meaningful support, and perception of mastery. Nevertheless, SES appears to be the more important determinant of these variables. As an aside, it is interesting to note that number of

Table 1. Correlations, Means, and Standard Deviations (N = 783)

	1	2	3	4	5	6	7	8	9	10
1. Sex (female)	1.00									
2. Age	−0.08	1.00								
3. Ethnicity[a]	0.04	−0.10	1.00							
4. SES[b]	−0.04	−0.15	−0.51	1.00						
5. Life Stress	−0.02	0.02	−0.03	−0.02	1.00					
6. Economic Hardship	0.06	−0.06	0.37	−0.60	0.13	1.00				
7. Support	0.09	−0.12	−0.40	0.62	−0.01	0.65	1.00			
8. Mastery	0.07	−0.17	−0.32	0.51	−0.20	−0.43	0.44	1.00		
9. Depression	0.14	−0.02	0.23	−0.34	0.32	0.40	−0.31	−0.50	1.00	
10. Anxiety	0.12	−0.05	0.13	−0.22	0.37	0.25	−0.20	−0.38	0.73	1.00
Mean	0.60	47.02	17.42	−0.00	2.09	1.71	0.00	15.03	28.34	14.09
Standard Deviation	0.49	17.26	7.83	1.79	1.99	2.32	1.77	3.00	10.22	4.70

[a] Degree of Mexican acculturation

[b] Education and income variables were transformed into standardized (z) scores

life stress events during a 12-month period does not significantly correlate with either SES or degree of Mexican acculturation. Apparently, members of all SES categories, whether Anglo or Hispanic, are almost equal in likelihood of being subjected to life stress. Of course, ability to adapt to these stressors has a great deal to do with such factors as ethnicity, SES, possession of support, and perceived environmental mastery.

Multiple Regression Analyses

Due to similarity of findings summarized in Tables 2 and 3, the results of the Multiple Regression Analysis for depression and anxiety will be directly compared. As previously noted, variables were entered into multiple regression analyses in three blocks. In the first block (sub-Table 2a and sub-Table 3a), ethnicity and SES are regressed against depression or anxiety, in order to ascertain the predictive strength of each of these independent variables after controlling for effects of the other. Standardized regression coefficients (*betas*) in sub-Table 2a and sub-Table 3a show that both ethnicity and SES are significantly associated with depression and anxiety, after controlling for effects of the other variable. In agreement with findings reported in Table 2, however, SES is by far the stronger predictor of psychological distress. Betas for SES on depression and anxiety, after controlling for ethnicity, are -0.300 and -0.193, respectively. Corresponding betas for ethnicity are 0.081 and 0.035.

A similar pattern exists in sub-Tables "b" of Table 2 and Table 3. Entered with ethnicity and SES are life stress and degree of financial hardship. For depression (sub-Table 2b),ethnicity remains significant even after effects of SES, life stress and financial hardship are removed from the equation. The beta for SES also remains statistically significant, after controlling for effects of ethnicity, life stress and financial hardship. SES, however, remains the stronger predictor of depression. Concerning anxiety (sub-Table 3b), the effects of ethnicity become non-significant, after controlling the effects of SES, life stress, and financial hardship. Effects of SES on anxiety, however, do remain statistically significant. Again, the pattern of these findings suggests that, of ethnicity and SES, the latter variable is the more important determinant of psychological distress.

Findings in sub-Tables "b" of Table 2 and Table 3 hint at an unexpected finding that becomes clearer in sub-Tables "c". Note that the mediating variables life stress and financial hardship (sub-Table 2a) are stronger predictors of depression than either ethnicity or SES.

Table 2a-c. Unstandardized and (Standardized) Regression Coefficients for Predicting Depression[a]

Independent Variable	Dependent Variable: Depression	
2a. Effects of Ethnicity, and Socioeconomic Status		
Ethnicity[b]		
Degree of Mexican acculturation	0.110	(0.081)*
Socioeconomic status	−1.748	(−0.300)***
$R^2 = 0.12$		
2b. Entering Life Stress and Financial Hardship		
Degree of Mexican acculturation	0.089	(0.068)*
Socioeconomic status	−0.893	(−0.153)***
Number of life-stress events during past 12 months	1.493	(0.291)***
Lack of money to buy necessities	1.102	(0.249)***
$R^2 = 0.26$		
2c. Entering Mastery, Social and Institutional Support, Age and Sex		
Degree of Mexican acculturation	0.021	(0.016)
Socioeconomic status	−0.281	(−0.048)
Number of life-stress events during past 12 months	1.203	(0.234)***
Lack of money to buy necessities	0.706	(0.160)***
Mastery[c]	−0.213	(−0.357)***
Support	−0.116	(−0.027)
Age	−0.044	(−0.075)*
Sex (female)	2.098	(0.110)***
$R^2 = 0.36$		

[a] Cronbach's alpha for depression scale is 0.924
[b] Cronbach's alpha for Mexican acculturation scale is 0.962
[c] Cronbach's alpha for mastery scale is 0.780
*p 0.05
**p 0.01
***p 0.001

The same is true of life stress in sub-Table 3b, where the beta (0.355) for this variable regressed against anxiety is much stronger than that (−0.115) for SES. Unlike findings for depression, however, SES and financial hardship (beta = 0.118) are relatively equal predictors of anxiety.

In sub-Tables "c" of Table 2 and Table 3, respectively, the remaining mediating and control variables are entered into the mul-

tiple regression equation. With the inclusion of these variables, neither ethnicity nor SES is significantly associated with psychological distress. We suspect that part of this finding is an artifact of colinearity between SES and financial hardship. The correlation coefficient between these two variables in Table 1 is -0.601. Thus, knowledge of either of these variables explains 36 percent of variance in the other. Similar problems of colinearity exist between possession of meaningful support and SES ($r^2 = 0.48$), and between

Table 3a–c. Unstandardized and Standardized Regression Coefficients for Predicting Anxiety[a]

Independent Variable	Dependent Variable: Anxiety	
3a. Effects of Ethnicity and Socioeconomic Status		
Ethnicity Degree of Mexican acculturation	0.021	(0.035)*
Socioeconomic Status	−0.519	(−0.193)***
$R^2 = 0.04$		
3b. Entering Life Stress and Financial Hardship		
Degree of Mexican acculturation	0.028	(0.039)
Socioeconomic status	−0.308	(−0.115)**
Number of life-stress events during past 12 months	0.839	(0.355)***
Lack of money to buy necessities	0.240	(0.118)**
$R^2 = 0.19$		
3c. Entering Mastery, Social and Institutional Support, Age and Sex		
Degree of Mexican acculturation	0.008	(0.013)
Socioeconomic status	−0.033	(−0.012)
Number of life-stress events during past 12 months	0.729	(0.308)***
Lack of money to buy necessities	0.132	(0.065)
Mastery	−0.447	(−0.285)***
Support	−0.007	(−0.004)
Age	0.002	(0.007)
Sex (female)	0.990	(0.103)**
$R^2 = 0.26$		

[a]Cronbach's alpha for anxiety scale is 0.876
*p 0.05
**p 0.01
***p 0.001

perceived environmental mastery and SES ($r^2 = 0.26$). Thus, it is far from clear that SES is a non-significant contributor to psychological distress. Colinearity problems also exist for ethnicity, but not to the same degree as for SES. The correlation coefficient (refer to Table 1) between degree of Mexican acculturation and financial hardship is 0.372. Thus, 14 percent of the variance in one of these variables is explained by the other. In addition, similar conditions exist between ethnicity and support ($r^2 = 0.21$), and ethnicity and mastery ($r^2 = 0.10$). Thus, although findings in Table 1, and sub-Tables "c" of Table 2 and Table 3 clearly indicate that SES is a much more important indicator of psychological distress than is ethnicity, it cannot be clearly stated that neither of these variables is of relevance after mediating and control variables are entered into the multiple regression equation.

On the other hand, findings in sub-Table 2c and sub-Table 3c clearly indicate the importance of variables other than ethnicity and SES in explaining onset of depression and anxiety. After controlling for all other variables in the equation, perceived environmental mastery (beta = 0.357) and life stress (beta = 0.234) are strong determinants of depression. These two variables exert a powerful influence on anxiety as well (betas = 0.285 and 0.308). Thus, independently of ethnicity, SES, and other mediating and control variables entered into block "c" (Table 2 and Table 3) both a fatalistic orientation, and subjection to negative life events, respectively, are sufficient in themselves to bring on the two forms of psychological distress under consideration. No other variable in block "c" comes close to mastery and life stress in explanatory power. It should be noted, however, that financial hardship, age and sex are also significantly associated with depression and that sex is significantly associated with anxiety. Interestingly, financial hardship appears to directly influence depression but not anxiety. Age also directly, but inversely, affects depression, but not anxiety. This finding is anomalous in that the elderly have been found (Mirowsky & Ross, 1989) to possess a relatively high incidence of depression. It should be noted that the bivariate correlation between age and depression (refer to Table 1) was only -0.02, and although statistically significant, the beta of -0.075 for age on depression (sub-Table 2c) does not indicate a particularly strong degree of association between these variables. Nevertheless, findings in sub-Table 2c do indicate, that, among El Paso respondents, age is inversely associated with possession of depressive symptomatology. Unlike age, the gender varia-

ble does associate with psychological distress as predicted in literature cited above. The sex of the respondent significantly and independently associates with depression and anxiety. Females are more likely then their male counterparts to possess psychological distress.

Finally, the square of the multiple correlation (r^2) coefficient indicates the combined strength of variables entered together within a particular block in predicting depression or anxiety. The r^2 in sub-Table 2a indicates that 12 percent of the variance in depression is explained through the combined effects of ethnicity and SES. Thus, in combination, ethnicity and SES do meaningfully contribute to our understanding of depression. SES, however, constitutes the major contributing factor in explaining depression. Concerning anxiety (sub-Table 3a) the combined explanatory power of ethnicity and SES is relatively weak. The r^2 in this sub-table indicates that only four percent of the variance in anxiety is explained by these variables. When life stress and financial hardship are entered into the multiple regression equation with ethnicity and SES (sub-Table 2b and sub-Table 3b), the percentages of explained variance in depression and anxiety increase to 26 and 19. Thus, life stress and financial hardship increase the percentage of explained variance in depression by 14 percent and in anxiety by 15 percent. When all variables under consideration are entered into the multiple regression equation (sub-Table 2c and sub-Table 3c), their combined effects explain 36 percent of the variance in depression and 26 percent of the variance in anxiety. Inclusion of life stress, financial hardship, mastery, support, age and sex increased the explained variance in depression, over SES and ethnicity alone, by 24 percent; and anxiety by 22 percent. Thus, in combination, variables under consideration in this study do indeed contribute to our understanding of psychological distress among residents of El Paso.

Clinical Implications

Findings in this study tend to support the minority status perspective concerning psychosocial determinants of anxiety and depression. Correlation coefficients (refer to Table 1) and standardized regression coefficients (refer to Table 2 and Table 3) point to SES, over ethnicity, as the stronger determinant of depression and anxiety. Nevertheless, ethnicity (defined as degree of Mexican acculturation) is significantly associated with depression *and* anxiety even after controlling for effects of SES. Thus, both of these variables are meaningful contributors to psychological distress.

Little evidence exists in this study which enables the assertion of Mirowsky and Ross (1984) that Mexican culture buffers Mexican-Americans from anxiety but makes this population relatively susceptible to depression. If the assertion were valid, one would expect a positive standardized regression coefficient between Mexican acculturation and depression, controlling for SES, and a negative coefficient between Mexican acculturation and anxiety. Findings presented in sub-Tables 2a and sub-Table 3a, however, indicate a positive and statistically significant association between Mexican acculturation and each form of psychological distress.

As noted above, neither ethnicity nor SES remain statistically significant as determinants of depression and anxiety after all relevant variables are entered into multiple regression equation (sub-Table 2c and sub-Table 3c). We do not interpret these findings to mean that sensitivity to ethnicity and socioeconomic background is clinically unimportant. Problems of colinearity and concomitant false negative results in multiple regression analysis have been discussed above and will not be repeated here. But more to the point, we suggest that clinicians not interpret these findings as a call to ignore Mexican-American and Anglo cultural differences. The difficulty that Mexican-American patients have in approaching institutional caretakers has been noted by clinicians to arise because of problems in perceiving any possible benefits from these services, as well as a frank mistrust of the clinical setting (Bach-y-Rita, 1982). These problems, however, are most likely associated with under-class Mexican-Americans. This assertion is indirectly supported by findings from a study (Quesada et al., 1977) of board membership lists from community mental health service agencies in San Antonio, Texas. Although a high proportion of board members possessed Spanish surnames, virtually all of these persons lived in high income census tracts. Thus, it appears that high SES does mitigate many of the effects of minority status by placing persons in a structurally prestigious and affluent network of relationships and associational memberships. On the other hand, cultural sensitivity should be an integral part of any therapeutic relationship, and especially for under-class Mexican Americans, the need for bilingual clinicians and support staff speaks for itself. Nevertheless, our findings suggest that overemphasis on so called Mexican cultural factors may comprise a waste of scarce resources and indeed may be perceived as patronizing by Mexican-American individuals.

Our findings (Table 1, and sub-Table 2a and sub-Table 2b) do suggest that under-class marginality, rather than Mexican-American status per se, may constitute the important inhibiting factor in help-seeking behavior and good therapy. In this respect, there appears to exist the need for less bureaucratic, neighborhood oriented mental health care emphasizing traditional mental health center concepts. Clinics could provide outreach programs that establish networks with existing community associations such as church, neighborhood social clubs and sport leagues.

If nothing else, our findings indicate a need to move beyond the minority status-ethnic culture debate, in terms of a multifactorial approach to psychological distress, both for Anglos and Mexican-Americans. A multiplicity of variables—sometimes independently, but mostly in combination—produce a particular disorder. We feel that our findings strongly refute arguments that emphasize a single dominant factor over others. In addressing the clinical problems seen in mental health facilities serving Mexican-American and under-class patients, factors other than ethnicity and SES must be considered. For example, it is essential that the clinician relevant factors are considered, in terms of the ways in which these factors (e.g., personal distress symptomatology) interact with each other within a wide range of psychosocial antecedents to contribute to the production of a psychiatric disorder.

More specifically, our findings strongly reinforce the need for the multiaxial evaluation system suggested by DSM-III-R (American Psychiatric Association, 1987), especially Axis IV and V. (Axis IV refers to severity of psychosocial stressors). Assessment of life stress and degree of financial hardship is currently a common part of the clinician's work-up procedure but often is not determined as a continuum. Inclusion of a series of specific life stress questions, and an assessment index concerning the patient's material well-being, could be included during the initial evaluative stages of treatment. A simple summing of these indices would allow the practitioner to more accurately quantify severity of stress, while specifying critical economic hardship issues. Regarding the need cited by DSM-III-R, Axis V for a more global assessment of functions, we feel it is vital to assess the patient's possession of meaningful support network and perceived mastery over the immediate environment. And in line with DSM-III-R philosophy, these factors are measured in terms of degree rather than as either/or dichotomies. The term meaningful support is not

issued lightly. Work-up questions or scales concerning degree of support should cover the extent to which a client possesses a familial, peer, and/or institutional network that serves as a resource for specific socio-emotional and/or economic exigencies encountered in everyday life. As noted previously, immersion within a web of kin members is not necessarily an indication of positive support.

Regarding gender, female status tends to bring with it a relatively high level of depression and anxiety. Even after controlling for relevant variables (sub-Table 2c and sub-Table 3c), females tend to be more depressed and anxious than their male counterparts. These findings are consistent with recent Epidemiologic Catchment Area (ECA) prevalence rates of major depressive episode and anxiety disorders (Regier et al., 1988). We interpret these findings to mean that sociocultural conditions faced by women are in themselves capable of producing relatively high levels of anxiety.

Finally, the setting for this study is El Paso, Texas, a border community with large populations of Mexican-Americans and Anglo-Americans. The demographic characteristics of the area, which include the existence of dynamic migrant patterns, provide a fertile ground for the study of acculturation and its impact on the clinically relevant variables addressed in this study. In agreement with Yamamoto and Silva (1987), we feel that further research in this area should be longitudinal in nature and compare border with nonborder populations. Our study, which explores psychosocial factors as determinants of psychological distress, needs to be enlarged into a research model that analyzes how expanded hierarchical variable systems interact in producing psychopathology within and across ethnic groupings. Future research should integrate macro level and biopsychosocial variables, compare border and nonborder populations, be longitudinal in nature, and tested simultaneously on more than one ethnic grouping.

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Part II

Assessment

7

Latinos and the Expression of Psychopathology: A Call for the Direct Assessment of Cultural Influences

Steven Regeser Lopez

Many authors have encouraged mental health clinicians to take culture into account when evaluating and treating patients from diverse cultural and ethnic backgrounds residing in the United States (Sue & Sue, 1990; Pedersen, Draguns, Lonner & Trimble 1989; and Levine & Padilla, 1980). These authors argue that modifications in usual clinical assessment and intervention procedures are needed because there are important cultural differences between the dominant Anglo culture and the diverse minority cultures. Further, it is believed that if clinicians fail to consider the shared beliefs, values, and practices of the patient's cultural group, and if clinicians fail to modify their clinical practice accordingly, then people of color will likely be misdiagnosed and given improper treatment (Malgady, Rogler, & Costantino, 1987). Thus, the rationale for developing culturally sensitive clinical services is based in part on the notion that there are important cultural differences in the psychopathology of cultural minorities.

The importance of cultural factors within the mental health fields appears to be gaining widespread acceptance. This is evident in an increasing number of books published in this area (Comas-Díaz & Griffith, 1988), in an increasing number of conferences and workshops on this topic, and in an increasing number of articles in scholarly journals as reflected, for example, in the special issues of the *British Journal of Psychiatry* (1990), *Hospital and Community Psychiatry* (1988), and the *Journal of Consulting and Clinical Psychology* (1986).

Despite the growing recognition of the role of culture in psychopathology, it is worth noting that the empirical basis to this area of study, particularly for Latinos, is at best limited. Fabrega (1990) recently argued that mental health research concerning Latinos adheres to "establishment" paradigms, thus restricting its ability to

identify cultural influences in psychopathology. Measures of distress and disorder, for instance, have been taken from mainstream research with little if any modification for use in studying Latinos. Guarnaccia, Good, and Kleinman (1990) make a similar argument and point out the need to incorporate "indigenous categories of experience" within available epidemiologic measures.

Because of the limited data, an important rationale for developing culturally sensitive mental health services for Latinos is without adequate empirical support. In an effort to encourage further research, I review and critique representative studies of cultural influences in the expression of psychopathology of Latinos. Recent investigations of psychiatric epidemiology are among those reviewed. Studies of language influences in the expression of psychopathology are not included.

Without the empirical basis to identify cultural factors in the expression of psychopathology of Latinos, clinicians have the option of ignoring cultural influences or trying to take them into account without empirical guidelines. There is evidence that they are choosing the latter. A survey of mental health professionals found that they value the importance of culture in their work with ethnic minorities and are attempting to take such factors into account (López & Hernandez, 1986). Without empirically based guidelines, however, they may apply their own cultural assumptions. López and Hernandez found evidence that, when considering cultural factors, clinicians are at risk for minimizing actual psychopathology, because they believe the specific symptoms or disorder are reflective of culturally normative behavior. A strong empirical database of culture and psychopathology could contribute to correcting these and other potential errors in the evaluation and treatment of Latinos. Until there is such a database, however, guidelines are needed to assist clinicians in deciphering the cultural influences in the expression of psychopathology. Another objective is to review available research regarding how clinicians consider cultural factors in their clinical practice and, drawing from this research, to present guidelines for clinicians on how to consider cultural factors in their clinical evaluations of Latinos.

Researchers and clinicians are essentially asking the same questions: What is the meaning of a given clinical phenomenon, whether it is a set of responses to a diagnostic research instrument (e.g., The Diagnostic Interview Schedule), or observations based on a clinical interview? Is the identified phenomenon reflective of psychopathol-

ogy, culturally normative beliefs, or some combination of the two? My overall aim is to encourage both investigators and practitioners to directly assess cultural influences in psychopathology. By doing so, they will be less likely to apply cultural assumptions and more likely to identify true cultural influences in the psychopathology of Latinos.

The definition of culture used herein refers to the subjective elements of culture (Triandis, 1972), specifically the roles, values, and beliefs shared by a people or a particular segment of the population. Another way of stating this is that culture reflects the systems of meanings which are learned and shared by a particular group (Rohner, 1984). The study of culture and psychopathology then concerns how these systems of meanings are related to psychological distress and disorder.

Culture and the Expression of Psychopathology

Early research in Latino mental health identified several instances of how the Latino culture may influence the expression of psychopathology and related normative behavior. Latinos have been reported to somaticize their psychological distress (Stoker, Zurcher, & Fox, 1969), to present their distress as folk illnesses (e.g., susto or nervios) (Fernandez-Marina, 1961; Rubel, 1964), and to hear voices that do not necessarily reflect hallucinations (Torrey, 1972). There is little doubt that these phenomena occur. Because the early findings were based on clinical observations and/or studies with small nonrepresentative samples, the degree to which the results apply to Latino communities in general was not known.

Large scale epidemiologic surveys of psychological distress (Roberts, 1980; Vega, Warheit, Buhl-Auth, & Meinhardt, 1984) and mental disorders (Canino, Bird, Shrout, Rubio-Stipec, Bravo, Martinez, Sesman, & Guevara, 1987; Karno, Hough, Burnam, Escobar, Timbers, Santana, & Boyd, 1987) have been able to address the representativeness of some of the previously noted findings. The use of systematic sampling methods and instruments with demonstrated reliability and some validity contributed to enhancing the quality of this research. Further, with the inclusion of measures of acculturation among some of this research, there was hope that these investigations would be able to identify the manner in which cultural factors might influence the examined distress and disorders.

There is little doubt that this research, some of it discussed in this book by Canino, Escobar, Karno, Telles, and Vega, respectively, has

made a most significant contribution to Latino mental health. As a result of these efforts, we have considerable information regarding the prevalence rates of psychological distress and many mental disorders among several Latino communities, as well as factors associated with these rates (e.g., immigration status). Further, because of the use of accepted state-of-the-art measures, such as the *Diagnostic Interview Schedule (DIS)* and the *Center of Epidemiologic Studies—Depression Scale (CES-D)*, we can compare the obtained rates of Latinos with those from other populations, such as Euro-Americans and African-Americans, to assess the relative prevalence rates.

Although the noted epidemiologic investigations have made important contributions, this research has been limited in identifying cultural influences in the psychopathology of community samples. First, direct measures of culture, such as cultural norms or beliefs, have rarely been used. In a study by Mirowsky and Ross (1984) for example, the authors included a measure of locus of control; however, the instrument was not derived from studies of culture since it originated from the study of individual differences. As a result, it is unclear whether or not it is an accurate or specific measure of culture. Instead, researchers frequently interpret ethnic differences as reflecting cultural differences (Escobar, Burnam, Karno, Forsythe, & Golding, 1989). Second, the use of acculturation measures as a proxy cultural measure is limited because the meaning of acculturation effects is unclear. Such effects can reflect adherence to traditional cultural values, acculturative stress, language factors, selective migration or a combination of these other factors (Berry, 1990; Golding & Burnam, 1990). Third, researchers primarily use diagnostic entities or distress summary scores as the main dependent measures, although there are notable exceptions (Guarnaccia, Rubio-Stipec, & Canino, 1989; Escobar, Rubio-Stipec, Canino, & Karno, 1989). Diagnostic measures may be less sensitive to sociocultural influences than symptom-based measures of psychopathology. I will point out how these three factors have limited past research in identifying cultural influences along with offering recommendations on how future research can position itself to better identify cultural influences.

Indirect Assessment of Cultural Influences

The statistical methods most frequently used in the study of Latino psychopathology have been regression models that compare the rates of two ethnic groups, usually a specific subgroup of Latinos and

Euro-Americans. The focus of the research is to assess whether there are ethnic differences in prevalence rates or symptomatology. Because ethnicity is usually related to other sociodemographic factors, such as socioeconomic status, religious background, and age, steps are taken to control for these other factors. If ethnic differences still remain after applying statistical controls, then cultural factors are oftentimes implicated. For example, in the study of somatization among Mexican Americans, cultural explanations have ranged from generally pointing out that unspecified cultural factors might explain these differences (Escobar et al., 1987) to specifically point out how the Mexican American culture leads to the expression of gastrointestinal symptoms and the Anglo-American culture leads to the report of headaches (Stoker, Zurcher, & Fox 1969).

The weakness of this approach is that no direct measure of cultural beliefs and values are included in the research, as noted by Roberts (1980). As a result, it is difficult to confirm whether certain symptomatology or disorders are indeed culturally related. Without a direct measure of culture, one can at best say that the findings are consistent with a cultural hypothesis, nothing more.

The direct measure of cultural values has specific analytic advantages. In a cross-ethnic study, one can assess whether the two ethnic samples differ on a specific cultural value, rather than assume they do differ. That is, by including a culture measure such as religiosity and spirituality in an epidemiologic study of Latinos and Euro-Americans, one can directly test whether the two groups differ on this dimension. But it is important to note that by including direct measures of cultural beliefs and values, the investigator can test whether cultural beliefs mediate the relationship between ethnicity and psychopathology. For example, let us assume that a measure of spirituality was included in an epidemiologic study that found Latinos to report hearing voices more than Euro-Americans. The relationship between ethnicity, spirituality and hearing voices could then be assessed. Of particular interest would be testing a mediational model (Baron & Kenny, 1986) in which ethnicity is the predictor variable, hearing voices is the criterion variable, and spirituality is the mediating variable. Support for this model would be found if spirituality was found to be related to hearing voices, and if controlling for spirituality lead to a non-significant relationship between ethnicity and hearing voices. This pattern of findings would directly support the notion that the cultural value of spirituality underlies the observed ethnic difference in hearing voices.

The inclusion of cultural measures is also of considerable value

when studying only one ethnic group. One would expect variability on a given cultural measure, such as spirituality. This would then provide the investigator an opportunity to examine whether that cultural measure is related to the phenomenon of interest. For example, the relationship of spirituality to hearing voices could be examined in a study of only Puerto Ricans or of only Euro-Americans. It is important to note that cultural influences can be examined within majority and minority groups. Too often investigators have only implicated cultural factors for ethnic minority groups. The psychopathology of majority groups is also culturally influenced. The important point here is that by measuring cultural values and beliefs directly, cultural influences in the psychopathology of Latinos and other groups can be assessed.

Some Limitations of Acculturation Measures

To examine possible cultural influences, some investigators have used measures of acculturation. This approach is an improvement over merely examining ethnic differences and controlling for other variables, such as socioeconomic status. If acculturation can account for a significant proportion of the variance in the measures of distress or disorder among Latinos, then a stronger case can be made for a cultural interpretation than when only an ethnic difference is found. Even then, it is questionable whether acculturation indices reflect adherence to cultural values or norms.

Acculturation measures are at best only approximate measures of culture. The acculturation indices used to date typically are based on generation born in the United States and various behavioral indicators, such as language usage and ethnicity of friends. These are not direct measures of the specific cultural values and beliefs that are likely to underlie expressions of psychopathology. Instead, those investigators who use these measures assume that individuals of low acculturation are more likely to adhere to traditional cultural values regarding such variables as gender roles, familism, spirituality and collectivism/individualism. This assumption may or may not be true for a given sample. Therefore, it is important to include measures of values or beliefs, in addition to measures of acculturation.

Another reason why acculturation is a poor measure of cultural influences is that it is confounded with acculturative stress, or the stress experienced as people from one culture adjust to another culture (Berry, 1990). Some investigators have attempted to determine whether certain levels of acculturation are related to psychological

distress and rates of mental disorders. The findings with regard to Latinos are mixed. Some studies find more distress among the less acculturated, others among the more acculturated, and still others among those that fall between the assumed poles of high and low acculturation (Rogler, Cortes and Malgady, 1991). Whatever the finding, it is not reasonable to interpret these findings solely as acculturative stress. It seems possible that they could also reflect the association between specific cultural values, indirectly assessed, and level of distress or rates of disorders. Without directly assessing cultural values and beliefs, and without directly assessing acculturative stress, it is difficult to know the meaning of significant relationships between acculturation and psychopathology. The recent development of the Hispanic Stress Inventory (Cervantes, Salgado de Snyder & Padilla, 1991) may contribute to identifying the distinct effects of acculturation and acculturative stress on psychopathology.

Unit of Analysis

Another reason why few cultural influences in the psychopathology of Latinos have been identified is that the typical unit of analysis is somewhat removed from direct sociocultural influences. With regard to the assessment of prevalence rates of disorders, Karno et al. (1987) reported many more ethnic similarities than differences. Canino et al. (1987) also reported many similarities in the prevalence rates of disorders for Puerto Rican Islanders relative to the other U.S. mainland sites in epidemiologic studies. The identification of disorders is based on multiple criteria with inclusionary and exclusionary rules, several steps removed from the symptom, the basic unit of psychopathology. Disorders may not be as sensitive to the influence of the underlying sociocultural processes as symptoms might be (Draguns, 1980; Persons, 1986).

Several studies suggest the importance of symptoms in identifying cultural factors. Guarnaccia et al. (1989) derived an 'ataque de nervios' syndrome based on 12 symptoms from the somatization disorder of the DIS and data from the Puerto Rican Island epidemiologic study. Rubio-Stipec, Shrout, Bird, Canino and Bravo (1989) conducted factor analyses on the symptoms from the major diagnostic categories of the DIS and derived symptom factors for the Puerto Rican Island study and the Los Angeles Epidemiologic Catchment Area (ECA) study. Symptom-based analyses also have been conducted for somatization (Escobar et al., 1987) and depression (Garcia & Marks, 1989; Golding & Aneshensel, 1989; Golding,

Karno, & Rutter, 1990). Except for the symptom measures used to derive an assessment of "ataque de nervios," for which ethnic group differences were not assessed, the symptom-based research appears to have uncovered ethnic differences to a greater degree than the disorder-based analyses. Similar to the disorder based studies, however, many more ethnic similarities have been identified than ethnic differences. Most importantly, all of these findings are limited in that no direct measure of culture was used. Therefore, it is difficult to know the extent to which such ethnic differences are culturally based.

A study that demonstrates the importance of symptom analysis and attempts to test directly cultural hypotheses was recently carried out by Lopez, Hurwicz, Karno and Telles (1992). In this study, we examined the distribution of schizophrenic and manic symptoms among the Mexican origin and Anglo samples of the Los Angeles ECA. Karno et al. (1987) had reported that there were no significant ethnic differences in the prevalence rates of these two disorders. Lopez et al. (1992), however, found consistent ethnic/immigration status differences in manic symptomatology. For example, Mexican-born Mexican respondents reported less hypersexuality (2.2%) than U.S.-born Mexicans (4.3%), who reported less than Anglos (6.8%). In addition, among the schizophrenic symptoms, auditory hallucinations were found to be more often reported by Mexican origin respondents (Mexico-born Mexicans: 2.3%; U.S.-born Mexicans: 1.6%) than by Anglos (0.6%). Based on prior observations that suggested the role of religiosity for both symptoms (Torrey, 1972), we attempted to approximate a direct cultural test by examining the relationship between religiosity and symptoms. Regression analyses revealed that ethnicity is significantly related to the reporting of hypersexuality and that Catholicism mediates this relationship. Ethnicity is also related to hearing voices; however, religious affiliation was not found to be a mediator of this relationship. It may be that the report of auditory hallucinations is more related to spiritual beliefs that may exist independently of religious background.

Although this research goes beyond the typical comparative ethnic study by examining specific sociocultural factors that are related to symptomatology, it falls short of the ideal study. Catholicism is an important variable, but it does not capture actual values and beliefs. Measuring beliefs and attitudes about sexual relations would have provided a more direct assessment of cultural influences.

Another limitation is that the relationship between Catholicism and hypersexuality may reflect reticence on the part of Catholics to report this symptom, not their relatively lower level of sexual activity. Despite its weaknesses, this study illustrates the importance of assessing symptoms instead of disorders and of attempting to identify the sociocultural factors that underlie ethnicity.

Summary

Past clinical research and recent epidemiologic research has provided little indication of cultural influences. First, it is important that future research incorporate direct measures of culture, that is, measures of specific values or beliefs that are hypothesized to be related to the sign, the symptom, the distress, or the disorder under study. Second, acculturation measures should be incorporated in this research for clearly specified purposes, rather than as global measures of culture. Accordingly, if acculturative stress, for example, is central to the study's aim, then the assessment of acculturative stress should be a priority. Third, additional attention should be given to symptoms as the unit of analysis. In conjunction with the recommendations of Fabrega (1990) and Guarnaccia et al. (1990) to use more culture-specific approaches to studying populations of Latinos, these three steps should also contribute to improving the ability of researchers to identify cultural influences in the psychopathology of Latinos.

Clinicians' Consideration of Cultural Factors in Evaluations

Steps to improve the research concerning Latinos' expression of psychopathology will no doubt contribute to enhancing clinicians' consideration of cultural issues in their evaluation and treatment of this group. Clinical guidelines based on psychopathology research could be developed one day to assist practitioners in grappling with cultural issues when working with Latinos. Because of the limitations of available research, and because of the push for clinicians to consider cultural factors in their clinical practice, it is important to learn if and how clinicians are taking culture into account. One concern is that mental health professionals are applying cultural stereotypes in an effort to be culturally responsive. Although there is little systematic evidence as to what may or may not be cultural in nature, studying practitioners' use of cultural concepts may shed some light

on how such concepts should be applied. Specifically, by examining the clinical judgment process by which cultural factors are considered, an evaluation of the process can be made.

To examine how clinicians deal with the dilemma of considering cultural factors without applying cultural stereotypes, I review pertinent research regarding mental health professionals' consideration of cultural factors in their clinical evaluations. I organize this research around two questions: Do clinicians consider cultural factors? and What effect does their consideration of culture have on their clinical judgments? I draw from available case studies, survey research, and experimental studies. Based on this brief review, I offer guidelines on how best to take culture into account in evaluations of Latino patients. Much like my recommendations for psychopathology researchers, I encourage clinicians to directly assess cultural hypotheses.

Do Clinicians Consider Cultural Factors?

A number of sources indicate that mental health professionals are considering cultural factors in their evaluation and treatment of Latino patients. Clinicians have written about specific cases delineating how they have taken culture into account. For example, Cuellar, Martinez, Jimenez, and Gonzalez (1983) described their consideration of linguistic and cultural factors in the differential diagnosis of schizophrenia and major depression. Many other clinical observers have pointed out the manner in which they consider cultural issues (Comas-Díaz, 1981; Morales, 1982; Muñoz, 1981). Together, the clinical case reports indicate that clinicians do indeed consider cultural issues. Further, they reveal how mental health professionals modify their assessment, intervention, or both as a result of recognizing the cultural elements. It is unclear, however, to what extent clinicians other than the authors themselves consider cultural factors in their clinical practice.

Recent research conducted by me and my colleagues suggest that cultural considerations extend beyond the case reports in the clinical literature. In one mail survey of 118 licensed social workers, psychiatrists and psychologists practicing in California, 83% indicated that they take culture into account for most or all of their culturally diverse patients. In addition, they rated culture as very important; on a 1-9 scale anchored by the poles "not at all important" and "extremely important", their mean rating was 7.5.

In two independent studies of clinical judgment, two Southern

California samples of mental health professionals (n = 96; n = 72) reported that they considered the cultural background of the patient depicted in the clinical stimuli. In one investigation (López, 1983), the clinical stimuli comprised six, one-page case reports from actual patients representing a wide range of psychopathology. We manipulated the ethnic label of the cases so that, in one condition, a given case was identified as Mexican and, in the other condition, the case was identified as Anglo. Clinicians rated the degree to which each case was due to the patient's cultural background. When the cases were identified as Mexican, clinicians attributed the presenting problem significantly more to a patient's cultural background than when identified as Anglo. For example, in the case of a dependent wife, when identified as Mexican, the mean cultural attribution rating was 6.57 on a scale of 1 - 9 ("not at all" to "very much due to cultural background"). When identified as Anglo, the corresponding mean rating was 4.78. In the second study (López, Magaña, & Núñez, 1992), a videotape of an enacted clinical interview served as the clinical stimulus. Based on an actual case, an actress portrayed a Mexican-American female patient reporting among other things physical symptoms, depressed mood and marital distress. Again, culture was implicated to a considerable extent (mean ratings varied between 5.47 to 6.18 on the same 1-9 scale).

Altogether, the case studies and the three research studies converge to indicate that mental health practitioners are taking cultural factors into account. The research does have its limitations. Asking practitioners about their perceptions of the cultural nature of the problem may have heightened the attention of clinicians to culture, thus leading them to consider cultural factors to a greater degree than they actually do in their clinical work. Furthermore, the representativeness of the samples of practicing clinicians is open to question. For example, the response rate of the survey study was 40.8%; those who did not respond may view culture as less important than those who did respond. Despite these and other limitations, the best available evidence indicates that clinicians are indeed trying to consider cultural factors in their clinical work.

Impact of Cultural Considerations

Although it is important to know that clinicians may be taking culture into account, it is particularly important to assess the influence such considerations have on clinical practice. In an effort to examine this question, my colleagues and I have focused our attention on the

clinical judgment process. Specifically, we have examined whether taking culture into account leads clinicians to judge patients as having more or less pathology than when cultural factors are not considered. The available findings suggest that considering culture is a complex process which is not easily characterized in terms of its impact on clinical judgment. In this section, I review the available survey and experimental research which is comprised of other aspects of previously mentioned studies.

For the López and Hernandez (1986) survey, clinicians were asked to describe a time when they took cultural factors into account in their evaluation of a particular patient. Most respondents provided a brief case report (n = 96) in which a wide range of ethnic groups were represented among the cases, Latinos being the ethnic group most represented (n = 35). Refer to López (1987) for a closer examination of the cases of Latinos. These vignettes were subsequently analyzed with regard to what effect considering culture had on judgments of clinicians. One finding of interest is that for 61 cases, almost no mention of clinical judgments or diagnoses was made, despite the specific request to describe an experience of evaluating and/or diagnosing a culturally diverse patient. Although the respondents indicated that they did not alter their judgments as a result of taking culture into account, they did note that, in considering cultural factors, they more fully understood the presenting problem, they were better able to define the treatment goal, and they were able to alter the treatment in some fashion that they thought led to more effective care. Thus, for most clinicians, considering culture did not influence their clinical judgment. One interpretation of this finding is that clinicians may more readily take culture into account in areas other than their clinical assessment (e.g., intervention).

There were some clinicians, however, who did report that they changed their judgments following their cultural considerations. In fact, thirty-five clinicians, a bit more than one third of the sample, acknowledged doing so. Three stated that they judged the problem to be more severe or more resistant to change as a result of taking culture into account. The following vignette represents this view:

> "A 60-year-old Mexican alcoholic VA outpatient. Dependency needs with (his) family members were huge. If he were Anglo-Saxon, an attempt to deal with alcohol dependency alone might have had a chance of success" (López & Hernandez, 1986, p. 605).

The practitioner here notes that because of the patient's ethnic background, an intervention is not likely to be successful.

The other thirty-three respondents who reported having changed their judgments in some fashion indicated that they judged the problem to be less serious as a result of taking cultural factors into account. One such example is:

> "In my work with a particular Hispanic female, my judgment of her ego strength or self-image was quite different than it would have been had I not taken into account cultural patterns which "condoned" the male being unfaithful and having other relationships. Accepting this practice is not considered a deviant choice in a female of the Hispanic culture" (López & Hernandez, 1986, p. 603).

This mental health professional adjusted evaluation of the patient from having a poor self-image to having a normal self-image. The rationale of the clinician for this change was that extra-marital relationships are an accepted practice for Latinos. In other words, because of the perception of the psychotherapist that this practice reflected the norm for the Latino culture, the patient's reaction to her husband's behavior was not judged to be a problem. In summary, this study found that in most cases clinicians did not adjust their clinical judgment when considering cultural factors. When they did, however, they primarily judged the presenting problem to be less severe. Only on a few occasions were patients judged to be more disturbed because of the cultural perspective of the clinician.

The experimental study in which clinicians rated brief case reports (López, 1983) provides further evidence of varied effects of considering culture, particularly for the three cases which clinicians viewed as most related to cultural factors. Practitioners judged a case of a Mexican adolescent male with a gang-related problem as reflecting less disturbance and requiring less treatment the more they judged the problem to be related to his culture. The findings were reversed for the case of a dependent, passive wife, with marital problems. Clinicians judged the problem as more serious and as requiring more treatment as they attributed the problem to a patient's Mexican cultural background. In a third case, one in which a middle-aged mother felt unfulfilled, particularly after her children had left home, the clinicians' attributions to the patient's Mexican culture were unrelated to their clinical judgments. Like the previous study, the findings were mixed with regard to the relationship between the

practioners' considerations of cultural factors and their clinical judgments. This study suggests that the presenting problem may be important to how cultural attributions and clinical judgments are related.

A mixed pattern of results was also found in the second experimental study in which clinicians were presented with a videotaped clinical interview of the depressed, married, Mexican American woman (López, Magaña, & Nuñez, 1992). One set of findings revealed that the more clinicians viewed the patient's marital conflict and somatization as culturally based, the more serious they judged the patient's marital conflict and somatization to be. In this case, clinicians' consideration of culture led to the perception of more pathology. With regard to clinicians' judgment of the severity of her depression, cultural attributions were found to be unrelated. In other words, ratings of the severity of depression did not change as a function of clinicians' considerations of the patient's culture.

Taken together, the available evidence indicates that taking culture into account is related to a set of mixed outcomes in clinicians' judgment. On some occasions, considering culture is related to judgments of less pathology. On other occasions, it is related to judgments of more pathology; yet, on other occasions, there is no observed relationship between cultural attributions and clinical judgments. This divergent pattern of findings can be viewed as either revealing very little, that is, the findings appear to be random: some supporting the notion of a minimizing bias (judgments that there is less pathology than is the case); others supporting the notion of an overpathologizing bias (judgments that there is more pathology than is the case); and still others supporting the notion of no bias. Conversely, these results can be interpreted as reflecting the complex ways that cultural considerations can relate to judgments of clinicians. At this early stage of research, I take the latter view that the findings reflect complexity. It seems very possible that considering culture can influence the evaluations of clinicians in many ways.

One limitation of this research is that it is not known if such adjustments in clinical judgment reflect an accurate assessment of culture's influence or the application of cultural stereotypes, which may result in judgment bias or error. Although it is possible that such adjustments of clinical judgment reflect an accurate assessment, the fact that there is nothing in the clinical stimuli to warrant such adjustments suggests that they represent possible error. Just because the patient is described as Mexican does not indicate that a given presenting problem reflects more or less disturbance. Additional evi-

dence about the patient's cultural values and beliefs is needed before such modifications can be made. Also, the seemingly stereotypic ways that some clinicians reported taking into account culture as suggested by the vignettes supports the possibility of error. Given this perspective, the data suggest that as practitioners consider cultural factors in their evaluations of Latino patients, they are at risk for seeing less pathology or seeing more pathology than might be the case. Clearly, further research is needed to examine the conditions that most affect clinical judgment as clinicians consider the patient's cultural background. Of most importance is to include some gold standard as to what is the correct clinical judgment so that the observed judgments can be identified as accurate or as inaccurate. A similar perspective regarding the complexities in assessing whether or not patient variables such as gender, race, social class, etc. elicit biases in the judgments of clinicians is described by Lopez (1989).

Implications for Clinical Practice

The available findings on clinical judgment and cultural considerations indicate that clinicians are attempting to be responsive to the cultural values and beliefs of patients. Furthermore, their considerations of culture are at times related to their clinical judgment. Although it is important for clinicians to take culture into account in evaluating and treating Latino patients, it is important to do so carefully. The distance between cultural responsiveness and cultural stereotyping can be short.

There are a number of steps that clinicians can take to reduce the risks of error in considering the cultural context. The first is to recognize the considerable heterogeneity among Latinos. Socioeconomic status, generational status, language use, national origin, rural or urban background, etc. can be relevant variables in determining the applicability of specific cultural notions. Second, it is important that clinicians consider cultural notions as hypotheses, rather than fact, and that they test the hypotheses. For example, when considering that somatic complaints may reflect a culturally acceptable way of presenting psychological distress, the clinician can collect a detailed history of the course of the somatic complaints to see if their onset and offset correspond to periods of considerable stress. If this is the case, then the somatic complaints might be a culturally patterned form of expressing distress. In addition, the clinician might do best to assess the meaning that the patient and significant others ascribe to the physical symptoms. If this is an unusual symptom or set of symptoms that others rarely if ever experience, then such evidence

would go against a cultural hypothesis. On the other hand, if this presenting problem is relatively commonplace and has a specific meaning, then this would suggest cultural factors. In addition to assessing the cultural nature of the somatic complaints, a third step is to entertain alternative hypotheses. In this case, a reasonable alternative hypothesis is that the somatic complaints reflect a true physical disorder. Thus, a thorough medical examination would be required. In sum, being cautious in implicating cultural factors, generating and testing specific cultural hypotheses, and examining alternative hypotheses should serve to reduce the likelihood that clinicians misapply cultural explanations in working with Latino patients. For further discussion refer to López, Grover, Holland, Johnson, Kain, Kanel, Mellins, and Rhyne (1989).

Conclusion

There is considerable overlap with regard to the ways both researchers and clinicians can better assess cultural influences in the psychopathology of Latino patients. Both professional groups need to go beyond ethnicity as an indicator of culture. At best, ethnicity can only suggest plausible cultural hypotheses that require independent evaluation. To test possible cultural influences, both researchers and clinicians should push themselves to identify specific cultural elements that might be operating in the observed clinical phenomenon. As researchers, this means adding specific cultural measures in studies. Doing so should decrease the adherence to indirect measures of culture, as well as, post-hoc speculation about the role of culture in psychopathology. For clinicians, this means conceptualizing the specific cultural factors that might be influencing the functioning of a patient and directly testing for such factors. The more researchers and clinicians clearly define "what" about culture might be important and the more we directly assess the validity of cultural hypotheses, the better able we will be to accurately identify the role of culture in the psychopathology of Latinos.

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8

The Psychiatric Examination Across The Language Barrier

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At the beginning, all the earth had the same language and the same words. As men migrated from the East, they came upon the valley of Shinier and decided to build a city and a tower with its top unto heaven, to make a name for themselves. The Lord looked with concern at the city and tower which the men were building and said, "Let Me go down and confound their language, so that they shall not understand one another's speech" (Genesis, 11, 1-9). This is why the city was called Babel, because there the Lord confounded the speech of the whole earth.

According to a report of the U.S. Bureau of the Census (1990), about 25 million persons speak a language other than English at home. Of this group, about 8 million do not speak English well, or do not speak it at all. The most common foreign language spoken at home is Spanish, which is used by over 14 million people, followed by Italian, German, French, Polish and Chinese. Today, the number of limited-English and non-English-speaking persons in the United States is substantially higher due to the thousands of immigrants and aliens who continuously enter and take residence in this country (U.S. Bureau of the Census, 1990).

Although it is axiomatic that good verbal communication between clinician and patient is essential to proper psychiatric care, the number of psychiatrists and other mental health professionals who can communicate in any of the foreign languages commonly spoken in the United States is very limited (American Psychiatry Association, 1989). When a patient who is not fluent in English requires a psychiatric examination and no bilingual clinician is available, the usual practice is to conduct the evaluation in the English language and to use an interpreter only if the person is unable to communicate at all. In this paper, I will summarize the findings of a wide selection of clinical and research reports on the problems associated with employing English to assess the psychopathology of patients who have a limited

command of this language. I will not address here the issues involved in the use of interpreters (Marcos, 1979a; Putsch, 1985). It should be noted that the largest portion of this literature reviewed has focused on the Spanish-speaking population.

A review of the literature on the evaluation of global psychopathology reveals lack of agreement as to whether the evaluation of limited-English speaking psychiatric patients in English raises or lowers clinician ratings of these patients' severity of illness. While there are reports indicating greater psychopathology in the primary language (Del Castillo, 1970; Gonzalez, 1978; Price & Cuellar, 1981; Ruiz, 1975), some studies show that Spanish-speaking psychiatric patients with limited proficiency in the English language are assessed as presenting higher levels of pathology when the language of interview is English rather than Spanish (Marcos et al., 1973a; Marcos et al., 1973b). Although it is difficult to compare these studies given their different populations and research designs, it is possible that these diverse findings may simply represent different snapshots of interactions among language, culture, clinical judgment, and psychopathology (Abad & Boyce, 1979; Lopez, 1988; Malgady, et al., 1987; Rogler et al., 1989; Vasquez, 1982). At a more specific level of analysis, however, the literature reveals that several areas of the psychiatric examination are strongly influenced by the language barrier. These are the patient's general attitude toward the examiner and toward the interview situation, motor activity, speech, affect and emotional tone, and sense of self. Each of these will be examined in more detail below.

General Attitude

Patients struggling with a language barrier often behave in a self-effacing manner that clinicians may interpret as guarded behavior or uncooperativeness (Fitzpatrick & Gould, 1970; Kline, 1969; Simmons, 1961). These patients sometimes speak in ways that may create the impression of slow or reluctant participation in the interview. For example, in a comparative content analysis of the speech of primarily Spanish-speaking schizophrenic patients who were interviewed in both English and Spanish, a striking tendency was found for patients to answer English questions with just a word, a silent pause, or a short sentence such as "I don't know", "I don't think so", or "yes sir", all easily interpreted by clinicians as a reluctance to communicate (Marcos et al., 1973a). Also, some foreign born immigrant patients whose English is limited may have a negative attitude toward

the English language that can permeate their general predisposition toward the English-speaking clinician and the interview situation (Buxbaum, 1949; Edgerton & Karno, 1971; Horn, 1977; Marcos, 1982; Rogler et al., 1980; Weinreich, 1953).

In addition, because the language barrier interferes with the patient's ability to understand the clinicians' verbalizations, particularly vocal cues such as intonation, pauses and emotional tone, the flow of the interview tends to be stilted and to lose emotional connectedness (Solomon & Ali, 1975). In turn, the demands placed upon the clinician to decide which of the patient's verbal cues are relevant and which are a mere consequence of his or her linguistic deficit, can cause interviewer frustration and uncertainty about the accuracy of the examination (Kline, 1969; Marcos, 1979c). Another factor that may affect the patient's attitude towards the interview situation is that some people, when communicating in a non-dominant language, tend to feel less intelligent, less friendly and less self-confident than they might feel if they were speaking in their primary language (Segalowitz, 1976).

Motor Activity

Clinicians view the quality and quantity of patients' body movements as a reflection of their affect (e.g., motor retardation and depression; enhanced physical tension and anxiety). In one study, Spanish-speaking schizophrenic patients, with a clear deficit in the English language, were rated by clinicians as more tense when interviewed in English than when interviewed in Spanish (Marcos et al., 1973a). A subsequent comparative analysis of their body movements showed that there was an actual increase in motor activity during the English interviews, but that the additional movements may have been associated with the more demanding task of encoding or verbalizing in the English language and not necessarily with psychopathology (Grand et al., 1977). Other experimental studies have confirmed that individuals produce more non-verbal activity, particularly hand movements, when communicating in a language of which they have poor command. This may reflect either an increase in the work involved in verbalization or the patients extra effort to reach the interviewer and establish contact (Marcos, 1979 b). Clinicians evaluating patients' motor activity in the face of a language barrier, therefore, confront the difficult task of separating verbalization-related movements from those reflecting tension or anxiety (Freedman et al., 1972).

Speech

There is extensive clinical and experimental evidence demonstrating that the speech of patients is affected in important ways when they speak in a non-dominant language (Diebold, 1967; Erwin & Osgood, 1954; Fishman & Cooper, 1971; Goggin & Wickens, 1971; Jakovits, 1961; Lambert, 1956; et al., 1956; Lambert, 1956; Maclay & Ware, 1961; Macnamara, 1967; Tanaka et al., 1963). For example, patients often verbalize primary language words during their English language interviews. This "language mixing", or primary language intrusion, which occurs more often in answers to emotionally charged questions or in situations of higher stress, makes patients' flow of thought sound less logical and more confused (Javier & Alpert, 1986; Javier & Marcos, 1989). Furthermore, patients struggling with a language barrier produce both longer silent pauses and more speech disturbances, such as incomplete sentences, self-corrections, repetitions, stuttering, and incoherent sounds (Marcos et al., 1973b). While these long pauses and speech disturbances have been considered to be indicators of depression and anxiety respectively in monolingual patients, they can also be a consequence of the patients' efforts to communicate in a non-dominant language (Alpert et al., 1967; Mahl, 1959; Pope, 1965).

Affect

Many studies demonstrate that speaking in a non-dominant language diminishes the emotional involvement of the patient and may produce the impression of emotional withdrawal or detachment (Buxbaum, 1949; Krapt, 1955; Marcos, 1976; Stengel, 1939). This effect has been postulated as being due to secondary language words having less vivid associations, evoking weaker references, carrying less emotional charge, and being less meaningful emotionally stimulating than primary-language words (Gonzales-Reigosa, 1976; Javier, 1989; Marcos, 1976). If so, this may explain why limited English-speaking Hispanic schizophrenic patients often display more intense emotions when they are interviewed in the Spanish language (Del Castillo, 1970; Gonzales, 1978; Ruiz, 1975).

There is also evidence that some patients, when speaking in a language in which they are less than fluent, focus their attention on the cognitive task of verbalization, and appear to concentrate primarily on the manner in which they say things and less on the content of what they are saying (Gonzales-Reigosa, 1976; Javier, 1989; Krapt, 1955; Sollee, 1970; Stengel, 1939). These patients may, for

example, speak about emotionally charged material without displaying the appropriate intensity of emotion. As a result, when communicating in the non-dominant language, certain experiences can remain vague and unreal for both the patient and the interviewing clinician. Conversely, some clinical reports suggest that some bilingual patients may be able to reveal certain significant experiences in their secondary language which in the primary language were left untold because of their high emotional content (Marcos & Alpert, 1976; Pitta, et al., 1978).

Sense of Self

Individuals communicating in a secondary language, as opposed to their mother tongue, not only have to deal with a different set of words but in some cases may perceive and describe themselves differently, and experience a different sense of identity when speaking the non-dominant language (Marcos et al., 1977; Velikovsky, 1934). In fact, there are times when patients give different responses to the same questions in their primary and non-dominant language (Ervin, 1964; Findling, 1969; Kolers, 1968). For instance, patients may report hallucinations only in their second language and deny hallucinations in their primary language (Hemphill, 1971), or they may describe different hallucinations, such as threatening voices in their non-dominant language, and "good" voices in their primary language (Frank, 1980; Lukianowicz, 1962).

A classic yet still controversial explanation of these phenomena is the language-relativity hypothesis, which postulates that language is not merely a vehicle of communication, but it is a reality through which people perceive and organize their worlds (Fishman, 1960; Sapir, 1929). Alternatively, these findings may be associated with the bilinguals' capacity to acquire, maintain and use two separate language codes, each with its own lexical, syntactic, phonetic and ideational component (Diebold, 1967; Greenson, 1950; Lambert et al., 1956; Macnamara, 1967). Compelling evidence for the language independence in bilinguals can be found in many clinical and psycholinguistic studies (Ervin, 1964; Findling, 1969; Kolers, 1968). In addition, following cerebrovascular accidents, bilingual individuals often exhibit differential impairment of their two languages (Critchley, 1974; Marx, 1966; Paradis, 1977).

Conclusions

The psychiatric examination of limited-English-speaking patients

places tremendous demands on clinicians who must face the difficult task of deciding which of the patient's verbal and non-verbal cues are relevant for the assessment of psychopathology, and which are "noise" or mere consequences of the language deficit that include the patient's attempt to overcome the language barrier.

Ideally, clinicians should be able to communicate in the patient's primary language. As achievement of this state is unlikely in a nation as ethnically diverse as ours, it is essential that, at the very least, clinicians performing these evaluations be sensitive to the linguistic implications and attitudinal effects of the language barrier which can substantially influence the patient's general attitude, motor activity, speech, affect, and sense of self, as well as the clinicians' perception and interpretation of these. Potential misevaluation of the patient's responses may be minimized if the clinician is careful to anticipate the above referenced possible distorting effects. Beyond these educational efforts, one must consider having trained interpreters readily available to intervene in situations where the low proficiency of patients in the English language may substantially interfere with the accuracy of the examination.

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Hispanic Mental Health Research: A Case For Cultural Psychiatry

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The purpose of this paper is to examine the mental health problems of Hispanics from the standpoint of Cultural Psychiatry. This may be defined as the field of study that addresses relations between culture and psychiatric illness. In the present context, it involves analyzing the influence of Hispanic Culture on psychiatric illness problems of Hispanics: for example, the distribution, causes, manifestations, diagnosis, course and treatment of such illness problems. These topics need to be examined in light of the fact that Hispanics comprise a large segment of a complexly stratified population of a pluralistic society. The way this society defines and handles psychiatric illness of Hispanics, viewed in relation to the way it defines and handles illnesses of other segments of the population, are topics that a cultural psychiatry should address. The mental health problems of Hispanics and the way such problems are conceptualized and handled in a society, the dialectical interplay between illness phenomena and established categories of disorders, are integral to Cultural Psychiatry. Both sets of phenomena are seen as cultural in nature and as having political, economic and sociological consequences.

In examining Hispanic mental health research it will be useful to introduce the idea of an Establishment Psychiatry. This constitutes the dominant professional perspective about mental health problems and is seen to reflect a universalist focus and a biological determinism. In Establishment Psychiatry, genetic and neurobiological structures are the real and important loci of psychiatric illness problems. The form of illness and distress that these structures give rise to are described as relatively fixed and common to homosapiens. This means that the nosology celebrated in the catechism of Establishment Psychiatry, namely, DSM III R, is accurate, relatively unproblematic, capable of refinement and improvement as to the details but beyond the need of basic structural alteration. A model

of psychiatric disorders is reflected in Establishment Psychiatry: underlying psychiatric disease processes surface as illness problems in their pristine natural form and are shunted to clinical research treatment establishments where they can be accurately identified, entered into suitable research protocols and eventually treated by means of the latest technologically refined practices that double blind studies have established are efficacious. It is instructive to examine how this "establishment" model of mental health problems conforms to realities as described for Hispanic populations.

The Meaning of Hispanic Culture in Hispanic Mental Health Research

We review in this section how researchers in the Hispanic mental health field appear to be using the concept of culture. One view seems to be that of a population trait, much like the standard demographic variables of age, gender and social class (Lopez, 1989; Lubin et al., 1985; McLaughlin, Balch, 1980; Randolph et al., 1985). Hispanic culture is referenced by surname, place of birth or that of parents, physical characteristics, or simply by the subjects endorsement of "ethnic" preference. The role of culture in affecting such things as bias vis-a-vis diagnosis or treatment is all important and a researcher attempts to show statistical relationships between Hispanic identity and ways diagnoses are made and treatment modalities structured. Important characteristics of Hispanics are either not addressed (simply the fact of differences versus a reference group is important); and if addressed, are often not spelled out ahead of time. The richness of the concept of culture and Hispanic culture in particular appears to be bleached out of these studies which rely merely on trait features of clients or clinicians.

In studies of psychiatric epidemiology in Puerto Rico, (Canino et al., 1987; Helzer et al., 1990) culture appears to mean national identity (refer to Helzer & Canino, 1989). Contemporary nations share a number of characteristics, such as political economic structures, social stratification systems, beliefs regarding science and secular rationality and the desirability of Western education. There is power left in the concept of culture when differences are examined between Puerto Rico and St. Louis and especially Taiwan, but it is not clear that this is tapped in view of the rationale of these epidemiologic studies. As an example, much of the potential variability of cultural effects is weakened when purely quantitative aspects of drinking technologically processed forms of alcohol and when abstractly

stipulated behavioral complications of heavy sustained drinking in modern societies operate as "effects" of culture and alcoholism. The studies by the Puerto Rico group are models of psychiatric epidemiologic research and rigorously attempt to examine cultural variation. Their work is based, however, on a pre-established model of alcoholism as a "disorder" and does not seek to understand cultural variations in the way alcohol is used, excess drinking conceptualized and handled and how all of this fits in with distress and impairment as culturally grounded. In short, that "alcoholism" must also be viewed in relation to Hispanic cultural traditions needs to be appreciated.

The paper by Zippin and Hough (1985) more deeply considers culture. They based their study on the alleged importance in Hispanics (Mexican and Mexican-Americans) of the family and significant others as natural support systems in the maintenanceof self function. The role of perceived difference between self and others with respect to life events was analyzed in relation to mental health. The authors predicted that Hispanics would be more affected by these differences than Anglos because of self-family integration differences stemming from cultural traditions. They found some support for their hypotheses. The report of this study is difficult to understand fully, and the study itself seemed to have problems. It constitutes, however, an example of one in which the content of Hispanic culture is more deeply made use of analytically.

A much more elaborated use of the content of Hispanic culture is found in studies that concentrate on folk disorders and their meanings, either in rural or even urban populations. Some of these studies are descriptive and of course can entertain extended aspects of native beliefs and theories (Rubel, 1960; Tousignant, 1984). Other researchers operate through more controlled data collection methods (Jenkins, 1988a and 1988b; Low, 1981, 1985). These studies are able to enhance one's appreciation of how culture affects responses and interpretations of psychiatric illness because of their empirically controlled methods, their focus on identified families of patients carefully diagnosed, and the rich and sensitive use they make of cultural traditions.

A more cautious approach is shown in the papers by Lopez and Hernandez (1986, 1987). They studied how mental health clinicians used the concept of culture in their work with clients. The authors analyzed case summaries provided by clinicians of cases in which they (the clinicians) judged culture had been used in diagnosis and

treatment. In a somewhat reductionistic way, Lopez and Hernandez seem to struggle to uncover basic elements of culture that are used by clinicians in their attempts to diagnose and treat actual patients identified because "cultural factors" loomed important. The restraint of the authors with respect to their claim that culture affects manifestations and nature of clinical psychopathology in Hispanics is notable and surprising.

Differences in the way culture is used analytically reflect several things. The most obvious one is the kind of strategy and general orientation of the researcher. Empirically oriented, quantitative and quasi experimental studies require an abstract and static conceptualization of culture whereas ethnographic descriptive studies can luxuriate in symbols and semantic networks. And, of course, psychologists, social workers, sociologists and anthropologists have long traditions of research behind their efforts. Moreover, there are real philosophical problems in trying to "pin down" basic elements of culture, many seeing the attempt as flawed and missing the distinction between explanation and interpretation. Finally, since Hispanic culture is invariably seen in relation to Anglo culture and both are integral to complex nation states, the quandary of cultural homogeneity versus pluralism is an issue as well. Factors such as these pose scientific dilemmas for the attempt to incorporate an understanding of how cultural factors influence Hispanic mental health problems. Given the conventions that need to be followed in order to provide knowledge that will affect policy (e.g., what constitutes a disorder, how a cultural influence needs to be documented), quandaries that make hard the full explication of cultural influences can be seen as retarding and/or blunting the efforts to promote a full appreciation of Hispanic mental health problems.

One disappointment about the way the concept of culture is used involves the relative neglect of the specifics as versus varieties of Hispanic culture. In some respects Hispanics are handled as all alike, a factor that approximates how the concept of black ethnicity is used (Fabrega et al., 1989). There is a glossing over of the distinctness of the various regional traditions that contribute to "Hispanicity" (e.g., Caribbean as versus native Indian as versus Iberian) and sometimes of associated social variables (e.g., social class). Very often, the fact of Hispanicity is taken into account more deeply, but only with respect to degree of differentness or alleged "movement" toward the Anglo culture. A variety of scales of acculturation have been developed for Mexican-Americans, Cubans and Puerto Ricans (Cuellar

et al., 1980; Szapocznic & Kurtinez, 1980; Torrez-Matrullo, 1980) and this raises the question of what they might have in common and whether, in relation to mainstream Angloculture, the concept of a generic Hispanic culture has any power. It would be instructive to attempt to evaluate whether and, if so, how acculturation scales overlap. Can different types of Hispanics (e.g., Mexican-Americans) be distinguished from others (e.g., Puerto Ricans) on these acculturation scales? What power is there, in fact, in the idea that there is a set of Hispanic cultural traits that transcend regional origins and social class? These are questions intrinsic to a cultural psychiatric approach. When answered in relation to mental health problems, they would clarify understanding of the way cultural factors impact on psychiatric illness and whether service providers and reimbursers accommodate or fail to accommodate to Hispanic realities.

What is Hispanic Mental Health Research Doing and Where is it Going?

Hispanic Beliefs, Attitudes, Illness Pictures and Systems of Care

In an early study conducted in East Los Angeles, Karno and Edgerton (1969, 1971) reported a general similarity among Anglo and Mexican-Americans regarding concepts of illness. In addition, they pointed to the importance of language orientation as relating to attitudes and beliefs about psychiatric illness. Parra and Yiu-Cheong So (1983) conducted a study also involving attitudes and understandings about mental illness among Mexican-Americans. This study was much less controlled than that of Karno and Edgerton. Parra found no support for an acculturation hypothesis and showed that younger Chicanos perceive mental illness differently and in a narrower way. In a report concentrating purely on attitudes towards the mentally ill, Parra (1985) showed that age and gender of the Mexican-American were influential but that in general few overall differences obtained between Anglos and Mexican-Americans. A classic topic of community centered study involves simply the description of folk illnesses among Hispanics. The studies of Rubel (1960) conducted in Mexican-American communities and those of Tousignant (1984) in Ecuador were already cited.

The study of lay systems of care is a favorite topic in medical anthropology and health services research. Alegria et al. (1977) describes and analyzes some of the properties of the lay treatment centers available to Mexican-Americans of San Antonio. The study

is conservative in posture, drawing attention to the separateness between establishment as versus folk/lay systems of care. On the other hand, Kreisman (1975) reports on the creative integration of folk and establishment traditions in the treatment of two Hispanic psychotic patients. Hohman et al. (in press) have documented the extent to which spiritualism appears to be used as an adjunct support system in Puerto Rico. Building on insights of medical anthropologists (Garrison, 1977; Harwood, 1977), they relied on data gathered in an epidemiological study and showed that selected social characteristics, reported use of mental health professionals and subdiagnosable symptoms of depression were related in a logistic regression model with resort to spiritualists. Hohman et al. concluded that spiritualists did not appear to be major participants in the treatment of mental health problems in Puerto Rico. They point to the need for prospective studies in order to better establish (1) when persons turn to spiritualists, and (2) the interplay between the resort to these lay as versus establishment "clinicians". The covert pattern of use of spiritualists in Puerto Rico versus Brazil, for example, is a factor that limits the validity and generalization ability of this study. The extent of reliance of spiritualists is likely to be under-reported.

Low (1981) showed the diverse components of the lay syndrome "nervios" in patients of medical and psychiatric clinics. The social cultural rootedness of perceived sources of nervios is underscored. She offers a cultural interpretation of this symptom complex showing that it signals family difficulties and a sense of personal dyscontrol but does not endanger a sense of social identity as does the concept of mental illness. In another paper, Low (1985) compares the nervios symptom complex in widely discrepant Hispanic and non-Hispanic settings arguing against the view that it constitutes a culture bound disorder. Jenkins (1988a) studied native conceptions and attitudes about psychiatric illness among the relatives of Mexican-American schizophrenics. This study is insightful for the rich analysis it provides of how the concept of nerves is used by family members to cope with the burden of psychiatric illness; and in particular, as a way of lessening stigma and maintaining solidarity. In a separate study, Jenkins (1988b) compares the difference in the way the concept of nerves is used by Anglos versus Mexican-Americans. This study constitutes something of a challenge to an important dictum of Establishment Psychiatry, that schizophrenic illness tends to be viewed similarly across cultures. Jenkins also discusses possible reasons for and functions served by the use of a concept of schizophre-

nia versus nerves to explain disturbing symptoms involving cognition and emotion.

These studies offer a Hispanic picture of the meaning of terms and concepts used by Establishment Psychiatry. For example, the concept of nerves is anchored deep in native Hispanic cultural traditions. Important questions are raised about establishment concepts and practices viewed as cultural versus biomedical phenomena. In other words, how Hispanic consumers view the material addressed by the establishment, how they are affected by its conceptualizations, and how they integrate native and establishment knowledge.

The theoretical locus of these studies is far away from the setting where paradigms of Establishment Psychiatry operate. Hence, the information they produce does not directly challenge but simply sensitizes Establishment Psychiatry to alternative models. They warn that underneath and around the methodological tentacles that psychiatric epidemiologists thrust into the community, there exist a plethora of real-life mental health problems and ways of conceptualization and handling them that elude the epidemiologic reach. All of the latter problems mark the culturally authentic nature of psychiatric illness viewed in its cultural richness as versus biomedical abstractness.

Psychiatric Epidemiologic Studies Involving Hispanics

Psychiatric epidemiology, generally speaking, is a field that is anchored in establishment paradigms. Drawing on establishment concepts, it seeks to establish prevalence and incidence figures. Besides informing on these traditional measures, it can point to unusual clinically relevant facts and distribution patterns about a population. A number of such studies have raised awareness of distinctive clinical pictures and profiles of Hispanics.

There is a long standing controversy involving the level of psychological distress among Hispanics with much evidence suggesting mental health problems and some indicating artifacts produced by response style (Dohrenwend, 1966; Krause & Carr, 1978). Roberts (1980) has reviewed the literature pertaining to this problem and on the basis of a controlled study involving Mexican-Americans of Alameda County found support for increased distress as compared to Anglos. Many reports pointing to increased distress of Hispanics are a consequence of the scales used and the Hispanic's alleged tendency to somatize problems. Escobar (1987) and Escobar et al. (1987a, 1987b) have emphasized the high prevalence of somatization

problems among Mexican-Americans. Angel and Guarnaccia (1989) have reported similar patterns among Puerto Ricans. Their study included a general explanation of the role of affective states, conceptions of self and social context in shaping psychological distress towards a somatization mode. It would appear that Hispanics, perhaps preferentially those of lower social class, express and show distress and maladaptation in a phenomenologically different mould than do the contrastive Anglo (i.e., white, non-Hispanic) group. Similar results involving somatization as an idiom for the expression of psychological distress of Hispanics have been found in Latin America (Escobar et al., 1983; Mezzich & Rabb, 1980). These studies all point to high levels of psychological and somatic distress in Hispanics and are to be distinguished from controlled psychiatric epidemiologic studies which aim to measure levels of disorders using Establishment Psychiatry criteria and rationales. A somatization content to the Hispanic's idiom of distress is tantalizing and compels interdisciplinary efforts aimed at clarifying the interplay between culture, emotion and the self.

In studies aimed at measuring level of organic disorders, Escobar et al. (1986) have pointed out the fallacies of using the mini-mental status exam as a measure of organic impairment among Hispanics. They argue that language and educational level can contribute to spuriously high levels of cognitive impairment as measured by the Follstein battery. Bird et al. (1987) have produced comparable results in Puerto Rico. The study by Canino et al. (1987) of quintessential Establishment Psychiatry vintage, has underlined the similarity in epidemiologic profile with regard to selected psychiatric disorders between people of Puerto Rico and selected U.S.A. communities except for the former's higher measures of somatization and cognitive impairment (explained in large part like others mentioned earlier). The study by Garcia and Marks (1989) reports on the prevalence of depression among Mexican-Americans of Los Angeles using the CES-D scale. A higher level of endorsement of certain items of the CES-D was observed among Mexican-Americans versus Los Angeles non-Hispanic whites, but the meaning of this is not clear since matters involving semantics and culture could be an explanation. The study raises the question, however, that depression may be realized differently in Hispanics versus Anglos and not just involving somatization. They also pointed to differences in the factor structure of depression symptoms among less adapted and younger Mexican-Americans. In a similar vein, Rubio-Stipec et al. (1989), using

epidemiologic data from Puerto Rico, conducted factor analyses on the symptoms of the DIS that enter into the diagnosis of four types of disorders. They compared results with those obtained in the same way and using the same instrument for Mexican-Americans and Anglos of Los Angeles. They were able to show similar profiles for alcoholism and affective disorder but not phobic or psychotic disorders. Thus, even though the same parent set of symptoms and logic of evaluation were used, the symptom profiles of these latter two disorders failed to show concordance across ethnic groups. The results generally support the ideas of commonality and difference in the way symptoms cluster in Hispanics and Anglos.

In an illuminating study using data collected by means of the DIS in Puerto Rico, Guarnaccia et al. (1989) have shown how the native syndrome "ataques de nervios" can elude the diagnostic reach of the epidemiologists. Many "somatic-anxiety" symptoms of this syndrome happen to be picked up by the DIS and through an analyses of these, and from results of extra probes added to the study, they were able to show that probable ataque "patients" (compared to non-ataque "patients") were more likely to (1) receive certain DIS diagnoses (e.g., Depressive Disorder, Anxiety-Panic Disorders), and (2) use health care services (including spiritualists). Guarnaccia et al. (1989) suggest that ataques can be considered a cultural idiom of distress that describes a cluster of symptoms similar to panic attack but in contrast to the latter, it does not "come out of the blue" but follows culturally relevant social stresses. Their study thus raises questions about the cross-cultural validity of Panic Disorder as a nosologic syndrome, although it does tend to support the cross-cultural validity of key somatic symptoms of distress. Their study also raised questions about the cross-cultural validity of Somatization Disorder, many of the individuals receiving this diagnosis conformed to the ataque mode of expressing distress but were diagnosed with a variety of other (serious) establishment diagnoses and appeared to be using somatization merely as an idiom. In general, Guarnaccia et al. (1989) have pointed to the problems created by the overlap between DIS/DSM III based disorders and the culturally sanctioned response "ataques de nervios". What passes as an acceptable idiom for distress in Puerto Rico (1) resembles and in some instances can conform to a DIS disorder; (2) can be correlated with certain DIS disorders; and (3) can modify and becloud the clinical picture of still others. A limitation of this study is that it tends to stop short of stipulating or at least commenting on whether and, if

so, when a cultural idiom of distress constitutes an illness or medical problem in the native Hispanic system and the differences between such problems in the two systems of medicine (i.e., Hispanic and Establishment).

In summary, studies of the type reviewed in this section can challenge Establishment Psychiatry but only weakly since they rest on its paradigms. They emphasize that establishment rubrics tend to constrain and shape the nature of the psychopathology it uncovers. Despite this bias, important differences in the structure and interpretation of symptoms among Hispanics are still manifest. In some instances, establishment categories appear to capture bona fide native mental health problems; in others, it inappropriately labels modes of communicating distress. As a result, the studies perpetuate the echo raised by community descriptive studies considered earlier regarding the cultural uniqueness of Hispanics vis-a-vis mental health pictures. An imperfect fit is obtained between Establishment and Hispanic models of mental health problems. Most importantly, the echo is sounded even when Establishment Psychiatry's instruments are used; its categories and its logic are used to compel attention to cultural distinctiveness and to possible limitations of the establishment paradigms.

Problems Inherent In the Way Hispanics are Diagnosed and Treated Using Establishment Conventions

One of the strongest challenges to the way the establishment deals with the mental health problems of Hispanics is offered by those who concentrate on the dynamics of mental health care. This is a probing challenge insofar as it makes clear how lacking in sensitivity are the diagnostic categories and the treatment practices of the establishment.

The papers by Del Castillo (1970) and Sabin (1975) are classic statements of the earnest concern of clinicians about the problem of underestimating psychopathology in Hispanic patients when the mother tongue is not used. On the other hand, studies by Marcos et al. (1973a, 1973b, and 1976) have disclosed that schizophrenics can actually appear more compromised and disturbed when interviewed in English. In contrast, the study by Lubin et al. (1985) reports that the picture of disability painted by bilingual subjects when they complete the depression adjective checklist is essentially the same regardless of whether they rely on Spanish or English; furthermore, male bilinguals did not differ from females. Since this study

did not identify who the subjects were (e.g., patients or non-patients; acculturated or non-acculturated), it is not possible to learn whether psychopathology per se is colored by language and/or culture; and since general descriptions of mood were employed, it is not possible to specify whether significant aspects of illness problems that therapists must deal with are influenced by these same variables. Marcos (1976) has offered an analysis of the effects on and implications for psychotherapy of relying on a patient's second language. McLaughlin and Balch (1980) found that ethnicity of clinician appeared to make little difference in the way clinical vignettes involving Anglos and Chicanos were rated with respect to several clinical parameters. They, of course, relied on general hypothetical decisions involving idealized pictures of illness and did not probe in a realistic way either patient psychopathology or clinician practices. The study by Skilbeck et al (1984) documents that Hispanics seeking outpatient psychotherapy self report symptoms more prominently than blacks and that clinician's estimates of Hispanics' severity of disorder parallel the Hispanics' self reports. In this study, then, Hispanics were shown to differ from the way blacks self reportand were diagnosed, but Hispanics did not differ from whites. The study deals with a self selected group of individuals presumably sufficiently acculturated to seek establishment care and this may partially account for their similarity to whites (Anglos).

Review analyses and empirical studies (Lopez, 1989; Lopez & Martinez, 1986, 1987; Lopez & Nunez, 1987) address the general problem of how cultural background affects diagnosis and treatment. Considerable emphasis is given to Hispanics, but other ethnic minorities are also included. The work by Lopez constitutes a sober and critical look at how Hispanics might fare badly as a result of possible cultural biases inherent in establishment practices. Far from accepting the popular dicta that culture affects psychopathology and invariably leads to biases, he is concerned to document empirically whether and if so how interview schedules and clinicians might deal with the potential problems of cultural differences. His papers can be consulted for details and analyses of findings of sources for bias. The study by Baskin et al. (1981) addressed Hispanics (and also blacks) and documented the association between ethnicity and psychiatric diagnosis and the influences of clinician ethnicity in all of this.

Canino et al. (1987) showed that two Hispanic clinicians achieved acceptable reliability when offering multi-axial ratings of Puerto

Rican children but they did not grapple with any notions pertaining to family and social class background that might influence a "cultural" orientation. In effect, this study emphasizes that establishment criteria can be reliably applied to Puerto Rican children but leaves unexamined the questions of whether differences in cultural orientation might affect ease and/or relevance of diagnosis in terms of establishment paradigms. In other words, are there differences in the way disorders are manifest and/or in the applicability of diagnostic categories among Puerto Rican children? Are all Puerto Rican children the same from a cultural standpoint simply because they live in the same island and speak Spanish or might there exist differences in beliefs, attitudes and behavioral styles that might affect the structure and content of psychopathology? Is the idea of modernization as versus traditionalism at all a viable one to apply to the cultural orientation of Puerto Rican children? What is distinctly "Puerto Rican" and how does it vary in relation to social class? Or, could it be that the researchers are examining psychopathology in subjects before adult cultural differences become realized (i.e., enculturated)? (Refer to Shweder, 1985, for a review.). Finally, how might all of this differ among "mainland" Puerto Rican children? These questions can, of course, be applied to Hispanics from other nations. Besides touching on the topic of when or whether cultural differences become manifest, the questions raise the problem of cultural homogeneity versus cultural pluralism and the quandaries of measuring cultural orientation in a socially stratified society.

Rogler and co-workers (Rogler, 1989; Rogler, Malgady & Costantino, 1987; Malgady, Rogler & Costantino, 1987; Rogler, Malgady & Rodriguez, 1990) have underscored the ubiquity of the influence of culture in evaluation and treatment. They point to the vigilance that staff needs to adopt with respect to the implementation of establishment concerns regarding care delivery and the beneficial consequences that can result from the rendering of services responsive to cultural identity. An interesting question, never directly formulated by them, is whether culturally sensitive services constitute Hispanic mental health care versus suitably modified Establishment Psychiatry care and/or whether any meaningful difference can be said to exist between these two posited categories. Olmedo's (1981) review deals with the question of testing linguistic minorities and points to the important influence of bilingualism, acculturation, and differences in explanatory framework. This review exclusively ad-

dresses psychological assessment and is not central to issues of mental health per se. However, the controversy about I.Q. testing of minorities invokes the same reasoning as that involving the differences between culturally authentic procedures as versus establishment procedures for assessing psychiatric disorders.

Studies of the genre considered in this section are penetrating insofar as they point to insensitivities if not misguided efforts of relying narrowly on establishment methods, procedures and theories. Despite their critical and challenging nature, they are judged as limited to the extent that they do not force a true re-examination and/or reformulation of establishment rationales. The studies beg the following sorts of questions: Can or should a culturally sensitive approach to the problems of mental health of Hispanics rely on rationales developed using culturally distinctive epistemologies and paradigms? Should not establishment psychiatry paradigms be modified or reformulated so as to authentically reflect the realities of Hispanics' mental health problems?

Differences in the Way Psychiatric Disorders Are Realized in Hispanics.

Studies which examine the symptom patterns of "bona fide" psychiatric disorders among Hispanics aim to document differences. Such findings may merely attempt to point to variability associated with ethnicity; however, because they can potentially uncover unique patterns of variability in Hispanics, they raise the question of the suitability of establishment conventions, if not stereotypes, with respect to specification of disorders. They thus pose a potential challenge to Establishment Psychiatry. Because the studies rely on abstract criteria for disorders, they tend to wash away cultural differences. Thus, should such studies uncover differences they are seen as exposing more deeply embedded cultural biases (Fabrega, 1989).

The study by Velasques and Gimenez (1987) dealt with three separate categories of psychiatric inpatients and was aimed at clarifying whether the MMPI could produce differences in symptom patterns that allowed distinctions based on diagnosis. The study adds to the literature that underscores the disparities between what the MMPI produces as compared to DSM III. Since the study did not rely on a protocol of evaluation that took culture into account in a significant way, it cannot be expected to weaken the claim that Establishment Psychiatry categories as realized in the DSM III are in any way distorted or inappropriate. Furthermore, the fact that the

study dealt with a highly special group of patients who were not culturally or linguistically specified (inpatients committed to a maximum security facility) further limits what can be made of its results. The study by Randolph et al. (1985) compared the way Hispanic and Anglo schizophrenics reported symptoms. The rate of false positive diagnosis of schizophrenics based on the DIS was the same in both groups and no association between DIS diagnoses and ethnicity was found leading the investigators to judge in a preliminary way that the DIS was associated with little cultural bias. Furthermore, ethnicity was not associated with differences in DIS subscales or ratings based on other structured clinical instruments. Ethnic differences resulted, however, in the way DIS negative subjects handled reports of illness in a face to face interview, with Hispanics consistently under reporting symptoms versus Anglos who in an open ended setting came forth with symptoms. In a subsequent report of the same study, Escobar et al. (1986) emphasized again the similarity between Anglo and Hispanic symptoms but indicated that Hispanics reported a later age of onset, more somatization and less time in hospitals. Since somatic symptoms are not criteria of schizophrenia in Establishment Psychiatry, the observed difference in clinical phenomenology of schizophrenia among Hispanics and Anglos is given little weight by the investigators. A limitation of the study is that it involved only Hispanic males who were relatively well acculturated. In a study focusing on symptoms of depression and anxiety among Mexican-Americans of El Paso, Mirowski and Ross (1984) emphasized the importance of a belief in external control. They judged that Mexican culture through an emphasis on external control and fatalism produces opposed effects on anxiety as versus depression. Finally, the study by Rubio-Stipec et al. (1989) already reviewed above pointed to differences in the way Phobic and Psychotic Disorders were realized in Puerto Rico versus Anglos and even Mexican-Americans. On the other hand, concordance was shown with respect to Alcoholism and Affective Disorders.

In summary, these studies all rely on establishment categories of disorder and establishment measures of psychopathology, and all seem to support the view that, within this version of psychiatry, Hispanics and Anglos in general present similar clinical pictures in some classes of disorders. The studies do not address the question of whether establishment rationales and formulations regarding the indicators of disorders might exclude, disregard, or simply be insensitive to aspects of psychopathology that may naturally inhere in be-

havior patterns shaped by Hispanic cultural traditions. As indicated above, this was documented to be the case in Puerto Rico with respect to the symptoms associated with "ataques de nervios" (Guarnaccia et al., 1989)

Research Involving Evaluation Instruments

Given the awareness of the importance of language and culture in rendering mental health diagnosis and treatment sensitive to Hispanics, one can anticipate that a large effort has been mounted in the area of translation of instruments. If diagnosis of psychiatric illness were entirely an anatomical or physicochemical affair, this would be unnecessary, but given its behavioral basis and the dependence of accurate description on language, the emphasis on semantical and syntactical efforts becomes obvious. The study by Mahard (1988) involved assessing the value of the CES-D as a measure of depressive mood in an elderly Puerto Rican population. The alleged validity of this instrument was emphasized. Interviews were conducted in Spanish, but is not clear whether the instrument itself was either translated or completed by the interviewer as versus the patient subject.

The work of the Los Angeles and Puerto Rico group (Bravo et al., 1987; Burnam et al., 1983; Canino et al., 1987) are examples of the effort to render establishment instruments suitable. The two Spanish versions of the DIS that they have produced are in most respects identical in language although some modifications were introduced by the Puerto Rican group. In particular, they have (1) attempted to formally assess whether reports of unusual beliefs constituted psychopathology versus purely cultural perspectives (e.g., involving spirits) and (2) related reports of potential psychopathology to social and psychological functioning. The problems of disentangling psychopathology from cultural material and establishing that reports of behavioral difficulties constitute true pathology have been squarely faced and resolved to the researchers satisfaction. Interestingly, the Puerto Rican group drew attention to the differences between cultural conceptions and experiences of time in Los Angeles and their homeland. Most importantly, in a number of publications, the two groups of researchers have largely replicated profiles of reliability, validity and concordance of instruments and prevalence of disorders in mainland U.S.A. community settings.

In reading these papers, one gets the impression that the researchers seem desirous of establishing commonality of methods

of procedures by equating the "standardized" measures of the DIS obtained in non-Hispanics with those of Hispanics, and by obtaining epidemiologic measures that either match or not too strongly deviate from those obtained on the U.S. majority. In other words, the logic of DSM III which is the parental authority for the English and Spanish DIS, are handled as authoritative and non-problematic. Canino and co-workers (1987a, 1987b, 1987c) even assert that behavioral problems well connected to native cultural traditions, such as those involving folk illnesses, are adequately captured by existing categories in the catechism of DSM III. This perspective is consistent with that of most psychiatric epidemiologists and its cultural implications need to be appreciated; for example, an epidemiological study points to what Establishment Psychiatry deems is a bona fide psychiatric disorder. Its results stipulate the kinds of community mental health problems worthy of study and legitimately entitled to treatment. As implied earlier, discrepancies between establishment cultural categories of disorder and Hispanic cultural categories of illness (or "distress") constitute important raw data for a truly cultural analysis of how Anglo-American psychiatry operates in contemporary society.

Viewed in light of the science of psychiatric epidemiology, workers involved in the translation of the DIS have performed a service to Hispanic mental health research by broadening the efficacy of a key assessment instrument. Problems in the validity of this instrument and in the community assessment of psychopathology remain, to be sure, but they are integral to establishment rationales and paradigms and cannot be covered here.

Hispanic Research Involving Psychiatric Theory

Research directed at the validity of diagnostic categories, at systems of diagnosis, and at clinical facts regarding the cause, course and treatment of psychiatric disorders has the potential of questioning basic structures of psychiatric knowledge. It is pertinent to examine whether, and, if so, how mental health research involving Hispanics is contributing to this type of challenge of Establishment Psychiatry. The problem of genesis or precipitants of mental health problems will not be discussed since this has been amply covered in the literature. For example, the review analysis of Cervantes and Castro (1985) involving the applicability to Mexican-Americans of a stress-mediation-outcome model can be consulted for an example

of an attempt to examine the relevance of establishment etiology concepts for this group. The papers by Roberts (1987) and Ramirez (1987) are also germane.

Alarcon (1983) has provided an eloquent critique of DSM III from the standpoint of Latin-American psychiatry. He draws attention to the need for psychocultural categories of behavior and culturally sensitive criteria of definition, in order to facilitate application of the basic rubrics of psychopathology. In a more specific sense, the bulk of his criticisms involve the questionable appropriateness of DSM III Axis II categories for Latin-Americans and the necessity of modifying Axes IV stressors and Axes V adaptive functioning so as to render them appropriate to the Latin American social setting. Mezzich (1989) has recently provided a general statement about the contributions that have and can be made to worldwide classification systems by researchers and clinicians knowledgeable of Latin-American psychiatric problems. His report lucidly outlines the purposes and rationale of classification in psychiatry and persuasively points to the need for taking into account Latin-American psychiatric realities. Alarcon (1983) and Mezzich (1989) both implicitly underscore the centrality of diagnosis and classification in constituting a scientific psychiatry and they implore that such systems of codification should address the needs of diverse cultural groups. Their writings constitute an urging and exhortation to Hispanic mental health researchers; however, neither Mezzich nor Alarcon directly assert that establishment classification systems might be biased or that they might selectively ignore, over include or misrepresent Hispanic realities but this is certainly suggested.

The studies conducted by the Los Angeles group (Jenkins et al., 1986; Karno et al., 1987; Magaña et al., 1986) on the course of schizophrenia, constitute another locus of scientific/academic activity that is centered on a critical pillar of Establishment Psychiatry. This study begins, much like other studies focused on Hispanics, in an attempt to replicate establishment "facts". In this instance, the role of expressed emotion among relatives of schizophrenic patients on the latter's course of illness. Their results to date tend to support generalizations drawn from British and Anglo-American subjects. The relatively lower levels of EE among Hispanics versus Anglos was related to traditional notions pertaining to the family in Mexican culture. The potential buffering effect of high contact families with respect to high EE among some relatives was hypothesized. In other

words, high contact and high EE Hispanic family members may very well contribute stress to the patient but the high contact with low EE members that is available because of Hispanics larger families may ameliorate this effect. One anticipates that as these researchers tease out in a more elaborated but still controlled way the effects of family interaction in Hispanic families of schizophrenics, facts about the course of schizophrenia will come to reflect insights generated from the study of Hispanic culture in a compelling way. In this sense, establishment facts could be seen as truly Hispanicized.

The brief review of this section has posed questions with respect to what can be construed as an establishment fact about mental health research and practice, and what would constitute a Hispanicized establishment fact in this knowledge paradigm? One can extend this line of inquiry and rhetorically inquire as to what would constitute a fact in a truly Hispanic Psychiatry and additionally, whether and, if so, how much of a possibility there is for a universalistic establishment science of psychiatry that transcends cultures.

The Political-Economic Implications of Hispanic Mental Health Research: A Focus for a Critical Medical Anthropology

A theme within medical anthropology is focused on a critical examination of theory and practice of biomedical psychiatry (Schepper-Hughes & Lock, 1986; Singer et al., 1990). In this light, it is instructive to examine in a general way the kinds of questions pertaining to Hispanic mental health research that a critical medical anthropology could address.

A requirement for a critical evaluation of how Hispanic mental health research fits into establishment psychiatric knowledge and policies would begin by first describing the size, distribution and social composition of the Hispanic population, including its age, marital structures, along with its religious, economic, educational and occupational profiles. The amount and kinds of mental health problems of Hispanics, those receiving and not receiving treatment, would need to be estimated. Levels of disorders as stipulated by establishment criteria and levels of distress as realized in Hispanic populations would be needed. The social characteristics of disordered and distressed Hispanics need to be computed. This would be followed by a comparison of Hispanic parameters with those of other ethnic minorities; for example, that of Asians, Blacks, American Indians and native Alaskans.

How Hispanics in need of mental health care actually receive treatment is a problem that is not easy to establish. Community studies could provide estimates of the kinds of persons seen and institutions/clinics/hospital visited by Hispanics. A picture should ideally be developed of a putative Hispanic mental health system. The number and types of Hispanic mental health practitioners, and their distribution and mode of practice, would need to be collected and analyzed in relation to the size and characteristics of the population they service. Information pertaining to the social and ethnic composition of the clients of Hispanic mental health workers and institutions would need to be collected and analyzed to get a picture of who is being serviced in this "Hispanic mental health system." And, in areas where Hispanics constitute a sizeable population segment, the ethnic composition of the clients serviced by non-Hispanic mental health workers and institutions would also be needed. The languages spoken naturally by clients/patients versus service providers would need to be assessed. Finally, the picture that results would be compared to that painted about other ethnic/minority mental health workers and clients.

The obvious aim of analyses such as these is to arrive at an overall description of the mental health problems of Hispanics, how they currently receive mental health care and from whom, and the consequences of all of this. Thus, an estimate of the need for and adequacy of coverage of mental health services requires ascertainment of the quality of care received. This is an enormously difficult problem to clarify in the health services field generally. Ascertaining quality of care in the *mental* health field constitutes a no less formidable problem and ascertaining all of this in *Hispanics*, considering the special and complex role that culture and language play in mental health care and social adaptation generally, can be expected to complicate the problem even further. Nevertheless, such estimates and others that can easily be surmised are needed if one intends to examine Hispanic mental health problems in relation to how effectively Establishment Psychiatry is currently dealing with them.

Despite the fact that one could conclude that establishment psychiatric science has been significantly broadened and sensitized by knowledge drawn from Hispanic mental health research (Rogler, et al., 1987, 1989), it is not at all clear that establishment psychiatric knowledge structures and practice directives have in fact accommodated to the need for services that this research underscores. How

extensively and how well are Hispanic mental health needs being met, and how does this compare with the picture involving other minorities? Is a sufficient number of Hispanic mental health researchers and clinicians being produced in comparison to the size and need associated with other ethnic,/minority groups? Is establishment psychiatric policy regarding the research and treatment of mental health problems sufficiently sensitive to cultural factors? Are administrators and funding agency representatives of Establishment Psychiatry adequately responding to the mental health needs of Hispanics; and how does this compare with policies, decisions, and subsidies affecting other ethnic/minority groups?

The rationale for entertaining questions such as these arises due to such questions that are problematic and amenable to scientific inquiry. A broad picture of cultural psychiatry takes into account the relationship between medical system characteristics (e.g., conceptualizations and theories of disorders) and community mental health problems as culturally and sociopsychologically contextualized. This relationship is studied across types of society. More directly, an important concern is how the social and medical institutions of a society are describing, responding to and treating psychiatric illness problems, however these may be defined in the society. Cultural psychiatry is concerned with dialectics that involve such polarized entities as (1) biology and culture, (2) existing "real world" psychiatric problems and conceptual paradigms about them, (3) knowledge of causes of disorder versus systems of practice, and (4) objectives of treatment and end products of treatment efforts. More directly to present concerns, a cultural psychiatry should address such dialectics as (1) assimilation and acculturation of cultural minorities to mainstream society, and (2) assimilation and acculturation of knowledge about minority mental health problems to mainstream or establishment psychiatric knowledge, practice and policy.

The following are illustrations of questions that can serve to orient a culturally sensitive approach to Hispanic mental health research.

1. Why should biologically validated "disorders" be the only analytic units in psychiatric epidemiology or assessment of need of mental health services? Do there exist indigenous syndromes of disability that are not in the DSM III catalogue but should be? Should the formal requirements for the diagnosis of DSM III entities be modified to accommodate Hispanic realities?

2. Is the complexity of a clinical condition of Hispanics (clinical condition equals the total clinical facts about a patient) greater than

that of Anglos? How easily are Hispanic disorders diagnosed? Does clinical complexity (e.g., pattern of co-morbidity, ease of diagnosis, recourse to rule out diagnoses) differ in relation to degree of acculturation? Or, is there something intrinsic to the biocultural nature of Hispanicity that renders a clinical condition more or less complex in light of Establishment Psychiatry conventions? (Fabrega et al., 1989, 1990).

3. Given the complexity of migration/acculturation experience with respect to social and psychological adjustment, is it possible to identify syndromes or disorders triggered by it that are not, but need to be included in a psychiatric nosology? Does the concept of an Adjustment Disorder sufficiently account for migration/acculturation problems? If it does, should not Hispanic academicians be arguing for its legitimacy and authenticity as an entity in the nosology? (Fabrega & Mezzich, 1988).

4. What correspondences can be drawn between mental health problems (including "bona fide" psychiatric disorders) realized in native Hispanics of Latin-America versus mental health problems of migrant Hispanics in the U.S.? Does resort to spiritual release through altered states of consciousness constitute a normalized pattern of behavior that promotes mental or physical health adjustment in Latin-American settings; and is the ease of resort to these experiences curtailed in the U.S.A., rendering migrants more vulnerable to mental and physical health problems? Is the community/society of the U.S. more secularized than that of Latin America? And if so, what losses or gains are accrued from a mental health standpoint as a result of migration?

5. What benefits and/or deficits accrue to Hispanics who resort to indigenous healing traditions? Are there mental health problems for which indigenous healing traditions surpass establishment ones? Even if establishment mental health services are rendered culturally sensitive, can a valid and useful calculus be created for measuring the benefits and losses incurred to a hypothetical Hispanic patient as a result of receiving such services with reference to specific psychiatric disorders? Is the loss associated with establishment treatment of a particular disorder greater or smaller than that associated with indigenous treatment? What parameters of a disorder compel establishment treatment versus indigenous treatment?

6. A psychiatric diagnostic system should inform a mental health clinician about something of clinical value for understanding and managing a patient's condition. Could one develop an axis that takes

into account the ability of a Hispanic person to constructively make use of psychiatric treatment and profit from it? This might include such things as (1) reading, speaking, writing skills in English; (2) awareness and acceptance of establishment models of psychiatric illness and treatment; and (3) level of stigma accorded psychiatric illness by persons and significant others? Alternatively, the capacity of a person to integrate within and participate in mainstream society could be assessed and measured. This might include such things as level of educational attainment, acquired working skills and habits, level of social skills, availability of support groups and degree of opportunities and/or ambitions for assimilating into mainstream society. It is obvious that the phenomena considered in this axis of a psychiatric diagnostic system blends with phenomena subsumed by the concepts of assimilation and acculturation. Hispanic mental health researchers, with other ethnic minority groups, could usefully be engaged in developing such an axis to render the catechism of Establishment Psychiatry (i.e., DSM III R) truly responsive to Hispanic needs.

7. What would constitute a valid psychiatric treatment outcome measure for Hispanics? What areas of behavior as formulated in terms of Hispanic traditions constitute a return of function among Hispanics? Are the rationales and instruments used in the field of psychiatric rehabilitation sensitive to behavior and adaptation modes of the Hispanics?

Hispanic Mental Health Research Knowledge Viewed From the Standpoint of Social Change and Cultural Evolution

Hispanic Americans constitute a relatively large minority of the population. Consequently, their mental health problems are not an inconsiderable part of what the science and practice of Establishment Psychiatry should address. Moreover, because it is a large minority and growing, their problems of mental health when properly defined and understood should, in theory, play a role in contributing to the production of Establishment Psychiatric knowledge itself. Furthermore, because Hispanic Americans and their native language and culture are linked directly to that of a large portion of the populations in the Western Hemisphere, and Iberian peninsula on the European continent, Hispanicity constitutes an important influence in molding the social and psychological behavior of a large segment of the world population. In other words, even though one must con-

cede great variability, it is still the case that Hispanic cultural traditions involving conceptions of self and other,styles of emotional experience and expression, patterns of social relations and general attitudes and values about life, to name but a few, are social psychological parameters that share basic structures and content among a large number of people of the world. To the extent that aspects of mental health problems reflect these and related cultural themes, one must assume that cultural parameters of a Hispanic psychopathology are important elements that the theory and practice of a truly representative psychiatry should address. And finally, the premises and knowledge structures of any truly representative psychiatric science should ideally reflect insights about psychiatric illness borne out of the study of the mental health problems that are found in Hispanic subjects.

The preceding constitutes a general rationale for the incorporation of research knowledge about Hispanic mental health problems in a representative science of psychiatry. To look critically at how Establishment Psychiatry operates in relation to Hispanics (or Blacks, Asians, Native Americans and Eskimos) is to adopt a cultural psychiatric and historical/evolutionary approach. This is the case because in this approach the concepts of culture and that of societal/historical change are all important. They are used (1) to make sense of what constitutes a Hispanic psychiatric illness (i.e., what consumers of mental health services need and want); (2) to understand what service systems controlled by Establishment Psychiatry are able and willing to offer and why; (3) to enumerate the discrepancies and inconsistencies regarding definition of problems and structures of care; and (4) to describe the processes of social and historical change that are set in motion when these differences are made public through research. All of this is seen as integral to political economic factors operating in the society and on Establishment Psychiatry and to sociological factors promoting historical change.

Researchers who are interested in the problems of cultural evolution, as well as problems of acculturation/assimilation viewed in a historical framework, have a test case in the field of ethnic minority mental health research. The impetus for and the nature and consequences of ethnic minority research reflects the process of acculturation/assimilation viewed in a cultural evolutionary frame of reference. Ethnic minority research may be conceptualized as a component of the adaptive response of the ethnic minority group itself. Viewed generically, an ethnic minority group encounters adaptive

problems and challenges in the parent society and responds with a mixture of negative and positive adaptive changes. Research involving the mental health problems of the ethnic minority group is one such potentially positive response since it is often produced by minority/ethnic researchers, is prompted by deficiencies or puzzles found in the established mental health practice and knowledge structure of the society and is at least partially geared to changing, modifying or sensitizing them. Ethnic minority groups differ with respect to how actively they become involved in producing research knowledge about the social conditions (and otherwise) that contribute to mental health problems. The Hispanic group's social conditions, mental health problems, and adaptive research responses must be assumed to be different from that of Blacks, Asians and Native Americans/Indians. In short, if one adopts a large scale cultural evolutionary view of minority mental health research, a number of interesting questions may begin to be formulated.

1. What is the relationship between the social characteristics of the ethnic minority population and the kinds of mental health research questions it generates, is able to solve and, in fact, attempts to solve? How does all of this contribute to the plight of the ethnic minority group? Are there differences across ethnic minorities and how is one to explain these differences?

2. In a proximal sense, what promotes minority research? Is it to be viewed as an affirmation of the minority's "spirit" stemming from policy requirements of administrative agencies and personnel, or is it simply a result of interests posed by the problem itself, a purely cognitive scientific matter involving curiosity?

3. How do the cultural, historical and political economic conditions of an ethnic group contribute to its social adaptation in the larger, "parent" society and are the distinctive mental health problems that result properly represented in research? What are the generic conditions that attend the adaptation of ethnic groups versus the culturally distinctive ones? What are the mental health correlates of these two types of conditions and which ones are favored by researchers and policy setting representatives of funding agencies? How are the results of research on ethnic minority groups used in the parent society? Do the insights and knowledge structures produced by ethnic minority researchers make an impact on administrators such that the social conditions and associated mental health problems are adequately studied, modified or confronted differently? How do these factors differ across ethnic groups and why?

4. To what extent is ethnic minority mental heath research a spearhead for social and political change? To want extent does it merely follow or reflect social and political changes taking place in the society at large?

Summary and Conclusions

Some of the research literature pertaining to mental health problems of Hispanics was reviewed. An underlying emphasis of the essay is that contemporary mainstream perspectives on mental health problems are governed by definitions, rationales and imperatives that are positivistic and strongly influenced by biological factors. The dominant perspective was termed Establishment Psychiatry, because knowledge and practice conventions are integral to professional colleges and universities, research institutes, research funding agencies, public as well as private institutions that pay for mental health services, and the fact that the underlying theory behind these directives is certified by the state. In effect, social policy regarding mental health research and services provision is set by Establishment Psychiatry. Research involving mental health problems of Hispanics was examined in terms of how it relates to Establishment Psychiatry. In general, the research broadens the knowledge base of Establishment Psychiatry. Psychiatric epidemiologic knowledge in particular has been extended to cover Hispanic populations, and the study of the course of schizophrenia has been sharpened and deepened through work involving Mexican-Americans. Much research has pointed to biases in diagnosis and to differences between establishment paradigms of disorders and Hispanic models of psychiatric illness and distress. Although some have suggested that Hispanic cultural realities in the area of psychiatric illness need to be included in establishment conventions, few have actually challenged the validity of such conventions in a direct way. The paper implicitly and explicitly attempts to point out how Hispanic realities might be used to render Establishment Psychiatric conventions more representative and valid. Hispanic mental health research knowledge is also examined from the standpoint of political economic factors and the change and evolution that inevitably affects social and medical systems.

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10

DSM-IV Development and Hispanic Issues

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As a nosological introduction to the topic at hand, this paper will examine first the structure of a standard diagnostic system, followed by a review of the principles being used for the development of DSM-IV. Next, Hispanic issues pertinent to diagnosis and assessment will be considered. Finally, perspectives for enhancing the cultural sensitivity of the DSM-IV diagnostic system will be analyzed. Particular attention will be paid to special syndromes, diagnostic criteria, qualifications in the text and multiaxial formulation.

Key Structural Aspects of a Standard Diagnostic System

Diagnostic systems constitute attempts to represent reality in a way that could be helpful to understand clinical cases and to act in professionally effective ways. The diagnostic model is supposed to be a summarized approach employed to assist in the retrieval of information and to serve the various purposes of diagnosis, such as facilitating professional communication, making treatment decisions, planning public policies, conducting etiological research and enhancing theoretical understanding (Mezzich, 1989a).

Descriptive psychopathology developed during the first half of the 19th century in France (Berrios, 1984). At present, as we know, description of psychiatric disorders are heavily based on symptoms. Within such a framework, flexibility can be used to represent reality in a way that is helpful and useful. Most importantly, a diagnostic system should attempt to reflect the patient's condition as faithfully as possible. Type of psychopathological description is crucial to the identification of a case. It is important, however, to go beyond the traditional ways of describing psychiatric cases and not limiting our concept of diagnosis to just a list of categories.

In order to identify critical points and levels of a diagnostic system, two aspects of its architecture must be considered: first, the taxonomy of mental disorders and the principles that vertebrate

such classification, and second, how to organize a full diagnostic formulation.

Taxonomy of Mental Disorders

Stengel (1959) noted in his review of classification systems used in various parts of the world that etiology and phenomenology have traditionally been used in various combinations to articulate most psychiatric classifications. At present, the emphasis is on descriptive psychopathology. Currently, there is interest in making the classification as minimally inferential as possible. Accordingly, higher orders concepts such as psychosis and neurosis are given less importance. With respect to etiological elements, although clearly present in areas such as organic mental disorders and adjustment disorders, they do not have an over-arching role in the organization of recent classifications.

Psychiatric classifications have some form of hierarchical organization. There are major classes of psychiatric disorders and types and subtypes within each of them. In ICD-10, an attempt has been made to organize each chapter (e.g., infectious, circulatory or mental disorders), in such a way to arrange these catalogs into clusters. In this regard, it can be helpful, not only to understand the map of psychopathology, but also the formulation used in reporting it. It would be desirable for the top levels of a diagnostic hierarchy to be as meaningful and informative as possible. This is particularly compelling when there are logistical limitations in data gathering, reporting and analysis, as it often happens in developing countries (Mezzich, 1989a).

Another important point, besides the specificity of diagnostic categories needed for definitional clarity, is the role of residual, nonspecific categories. Besides their practical usefulness in preliminary evaluations, they allow flexibility for incorporating the classification syndromes not previously listed, as well as those of local or regional importance.

Of special interest are the different ways of categorizing diagnostic entities,including the classical model which assumes homogeneous diagnostic groups with distinct boundaries and defined by singly necessary and jointly sufficient features. On the other hand, the prototypic approach assumes heterogenous group membership, fuzzy and overlapping boundaries, and descriptive features that are correlated with, but not required for, group membership (Cantor et al., 1980). The former model can be considered deterministic and the lat-

ter probabilistic. There is an evolving consensus that, at least for problematic disorders blending with normality, prototypic approaches are most reasonable. In DSM-III there was an intent to be prototypic in the definition of some personality disorders and in ICD-10 this approach goes further, as indicated by the definition of all personality disorders with the same number of diagnostic criteria.

Another critical issue in the definition of mental disorders involves inclusion and exclusion criteria. DSM-III-R is characteristically more relaxed in the use of exclusionary factors than DSM-III, and, therefore, it allows a larger number of diagnoses to be formulated (Fenton et al., 1988; Gift, 1998). This has made more conspicuous the issue of comorbidity in clinical populations.

Organization of a Diagnostic Formulation

In considering the structure of diagnostic systems, a crucial contrast is that between the single label and the more complex formulations for the patient's condition. This dilemma usually takes the form of uniaxial versus multiaxial approaches. The former tries to summarize a case with just one category, in what is purported to be the "Kraepelinian Approach." Even Kraepelin, however, in his more mature years, acknowledged statistical mistakes in early analyses on courses of illness and acknowledged that non-disease-entity aspects, such as personality, significantly influence the course of "dementia praecox" (schizophrenia).

According to the multiaxial approach, in addition to the description of psychopathology, there are a number of biological and psychosocial factors that seem to be important for an effective portrayal of the patient's condition. It represents a more analytical, and at the same time, a more comprehensive approach. The use of this approach also offers the opportunity for flexibility in scaling, as dimensional ratings are often employed in addition to the more traditional categorical judgments (Mezzich, 1985). The latter has its roots in what has been, since the dawn of mankind, a human survival skill (Raven, Berlin & Breedlove, 1971).

An international consultation on multiaxial diagnosis sponsored by the World Psychiatric Association (Mezzich, Fabrega & Mezzich, 1985) found that five was the largest number of axes that a majority of 175 expert diagnosticians responding from 52 countries considered feasible for regular patient care. Worth mentioning is the work of Efren Ramirez (personal communication), in the Mental Health Services Office of Puerto Rico, using an octaxial diagnostic approach

that is quite commendable in trying to use eight axes, which include psycho-religious and other adaptive functioning aspects perceived as critical for the evaluation of patients in that part of the world. Five of the aspects, or perspectives, most frequently considered in psychiatric multiaxial diagnostic systems are as follows: general psychiatric syndromes, stable behavioral handicaps, general medical disorders, environmental context, and disabilities.

Development of DSM-IV

The project of developing the fourth revision of the DSM began shortly after the publication of DSM-III-R, notwithstanding concerns about the pertinence of its elaboration (Zimmerman, 1988). The DSM-IV Task Force appointed by the American Psychiatric Association pointedly considered ICD-10 in its deliberations, not only because of the agreement by the United States and most other countries to use the WHO's reference instrument, but also because ICD-10 is quite innovative and advanced vis-a-vis ICD-9 and previous versions (Frances et al., 1989).

There were three stages or basic elements in the development of DSM-IV. One was the review of the literature on DSM-III and DSM-III-R. The second involved re-analyses of available data sets. The third included field trials of proposals advanced for DSM-IV (Frances et al., 1990).

First, reviews of the literature on experience obtained with DSM-III and DSM-III-R were conducted in the systematic way usually associated with empirical research projects. This included a clear formulation of the nosologic problem to be investigated, the computerized and manual methods used to identify relevant literature reports, the tabulation of findings to facilitate the elucidation of patterns, and the thoughtful formulation of conclusions, options and recommendations. These reports are published in the Source Book that accompanies DSM-IV.

Second, re-analyses of available data sets were aimed at clarifying those nosological questions which remain outstanding, after the literature reviews have been completed. They tend to use multisite designs and comparative approaches. For the most part, these re-analyses were being funded by the MacArthur Foundation.

The third investigational stage in the development of DSM-IV involved conducting field trials in a number of different areas, such as: antisocial personality disorder, autism, conduct disorder, schizophrenia, mood disorders and anxiety disorders. The National Institute of Mental Health funded most of these field trials.

Also of interest in the process of developing DSM-IV were efforts addressed to enhancing its cultural validity (Mezzich, Fabrega & Kleinman, 1992). The development of DSM-IV represented an opportunity to deal more effectively with the challenges posed by Hispanic and other ethnic-identified populations.

Latin American Contributions and Issues

In considering Hispanic issues pertinent to classification and diagnosis, it is useful to review first some Ibero-American contributions, in order to identify themes and emphases that represent Latin concerns, followed by mentioning Hispanic issues relevant to diagnosis. With respect to diagnosis and classification, Horwitz & Marconi (1966) in Chile made an articulate plea for diagnostic definitions to be formulated in objective and operational terms. Leme-Lopes (1954) from Brazil pioneered the development of specific multiaxial systems. Leon (1970) conducted a pioneering survey of the attitudes of Latin-American psychiatrists toward existing diagnostic systems

With regard to the original description of regional syndromes (such as *susto* and *dano*), folklore, and cross-regional contrasts, the works of Seguín (1946), Bustamente (1961) and Perales (1985) are of pioneering value. Also, the descriptions of syndromes induced by local drugs of abuse such as cocaine and its *pasta basica* opened new paths in the field (Jerí, 1978; Nizama, 1979). In relation to the conceptualization of illness, Seguín (1946) emphasized the role of stress; Fabrega (1975) pointed out the necessity for a ethno-medical approach to illness; and Mariátegue (1985) formulated the development of alcoholism in a penetrating, historical and ethnographic way.

Critical Hispanic Issues

Ibero-American issues identified across the Americas are pertinent here. Cuellar (1982), in analyzing the various phases of the diagnostic process where sociocultural factors may play a role, concluded that failure to consider the whole patient, including cultural background, could substantially confuse diagnosis and treatment. Cuellar and Roberts (1984) found that cultural influences on form and content of symptoms are critical. Reflecting on the suitability of DSM-III for Latin-American populations, Alarcón (1983) pointed out the limited transcultural appropriateness of its diagnostic criteria for several components, particularly personality disorders. Santisteban and Szapocznik (1982) cogently argued for a bicultural approach to understand acculturation and the development of substance abuse among Hispanics in the United States. Alarcón (1983) and Seguín

(1946) called attention to the presence in Latin-American populations of intriguing regional and local syndromes. Furthermore, as Fabrega (1988) has noted, much of what is included in standard diagnostic systems are indeed culture-bound syndromes, but, in this case, bound to Western culture.

Sociocultural stressors are highly relevant to Hispanic mental health and illness. Parron (1982) has described specific stressors for ethnically identified minorities in the United States, such as prejudice, discrimination, and cultural-linguistic barriers. Becerra et al. (1982) pointed out the significant vulnerability of Hispanics as a group to the stress of acculturation and migration. In regard to support systems, Alvarado (1985) in South America found empirically, not only that a low level of support systems appears to increase vulnerability to adjustment disorders, but that the quality of the supports tends to improve the outcome of such disorders. In the United States, while family networks among Latin-Americans represent a frequent source of considerable support, there are limitations in the access of this ethnic group to the resources of the community at large (Escober & Randolph, 1982).

Another important diagnostic issue is language. Spanish (as well as Portuguese) is a fundamental aspect of Latin-American culture (Parron, 1982) and must be seriously considered in relation to both the expression of psychopathological experiences and the professional interpretation of such experiences.

Perspectives for Enhancing the DSM-IV Diagnostic System

In order to enhance the cultural validity of standard diagnostic systems, it is critical to identify and work on propitious elements and aspects of the diagnostic system structure. In this regard, we shall consider the opportunities offered by the introduction to the diagnostic manual, such as inclusion of new diagnostic categories, adjustment of diagnostic definitions, design of multiaxial systems, and development of a complementary cultural formulation.

Scholarly and empirical research on psychopathology must be informed by culturally relevant models. Rogler (1989) argues that research is made culturally sensitive through a continuing incessant, and open-ended series of substantive and methodological insertions and adaptations designed to mesh the process of inquiry with the cultural characteristics of the group being studied. Furthermore, the use of adequate diagnostic tools to gather multi-perspective data is crucial (Cuellar & Roberts, 1984; Mezzich & Berganza, 1984).

Introduction to the Manual

This represents an opportunity to guide clinicians and researchers on how to use the whole diagnostic manual and how to conduct a diagnostic evaluation in a culturally sensitive manner. Proposals here present the rationale for considerations that include evolving demographics and international issues. Cultural recommendations are highlighted, particularly for problematic areas such as personality disorders.

Inclusion of New Diagnostic Categories

One way to recognize diverse cultural realities in a diagnostic system is to incorporate syndromic categories observable in sizeable segments of the population. Categories such as Neurasthenia and Trance, and Possession Disorder, were proposed for inclusion in DSM-IV. This could be implemented by using standard diagnostic codes (somatoform or dissociative disorders) as fully distinctive categories, or housed under "other" or "unspecified" categories within pertinent sections of the catalog of mental disorders. Alternatively, in subsequent editions such proposals could be accommodated in the Appendix of the DSM-IV Manual and listed as categories requiring further research. Culturally bound syndromes and issues could be included as a glossary in the Appendix of the DSM-IV Manual. These syndromes could be cross-referenced, when appropriate, with corresponding to standard diagnostic categories.

Adjustment of Diagnostic Definitions and Cultural Considerations in Associated Text

Diagnostic definitions should be adjusted to recognize important cultural variations, particularly at the level of diagnostic criteria for categories highly dependent on cultural norms. In a more circumspect way, flexible adjustments are suggested in the form of cultural considerations printed in the text associated to the diagnostic categories in question. Optimally, considerations will have a format similar to recommendations for age and gender variations. An example are somatic symptoms as conspicuous in the characterization of depressive disorders in Latin American populations (Mezzich & Raab, 1983; Escobar et al., 1983).

Development of a Multiaxial Schema

The development of a multi-axial schema for DSM-IV offers a potent opportunity for the consideration of relevant cultural issues. All

axes, including those on mental and general medical disorders, are in need of cultural enhancement. Particularly important is work connected to the axes on environmental psychosocial factors (stressors and support systems) and on adaptive functioning. Among the former, one must consider barriers to mental health care, such as language, geographical distribution and socio-economic problems, as well as importance of the family as source of support among Latinos. Regarding functioning, cultural norms such as a cooperation versus competition need to be considered.

Complementary Cultural Formulation

Mezzich and Good (1991) developed a proposal to supplement the nomographic ratings of standard diagnostic systems with key ideographic points. Such points cover the personal experience of the patient, understood within a pertinent cultural context, and the structure and dynamics of the patient/doctor relationship.

The aforementioned recommendations were formulated for the cultural enhancement of DSM-IV. They were actively worked out by a scholarly group in interaction with the DSM-IV Task Force under sponsorship of the National Institute of Mental Health and the American Psychiatric Association.

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Part III

Primary Prevention and Treatment

11

Toward Combined Prevention and Treatment Services for Major Depression

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The major goal of the workshop which led to the present monograph was to define a future research agenda for meeting the mental health needs of the Hispanic population of the United States. Another goal was to inform and to motivate young mental health professionals to develop skills to address these needs.

This paper will address an area which has been consistently underemphasized in mental health research and practice, namely, prevention. Illustrations of a preventive approach will focus on one disorder: major depression. It is my contention that, unless preventive services for Hispanics and others are developed and carefully evaluated, we will not be able to reduce the prevalence of major depression. It is my hope that mental health professionals will find this argument convincing and that, at least some of them, will decide to devote significant portions of their professional energies to making prevention interventions an accepted part of mental health services.

To reduce the prevalence of major depression in Hispanics in the United States, it will be necessary to go beyond treatment services. This paper will present the rationale for focusing on prevention, reasons why prevention services may be particularly needed in Hispanic groups, limitations of treatment services, and the need to develop methods which can reach the majority of people *who need them*, rather than merely those who are willing to comply with professionally-defined service delivery. Given economic and institutional limitations, prevention services are most likely to be developed if combined with treatment efforts. Some specific strategies for implementing prevention programs will be described.

The goal of mental health services is to reduce the prevalence (i.e., the total number of cases) of mental disorders. This can best be done by a combination of successfully treating existing cases of the disorders and preventing new cases from developing. The former is

treatment, the latter is prevention. At present, the mental health system relies entirely on treatment approaches. I will examine the nature of the problem, using demographic and epidemiologic data to estimate the prevalence of major depression in Spanish-speaking Hispanics, and whether treatment approaches to reducing prevalence are feasible.

How many adult U.S. Hispanics suffer from major depression?

To answer this question, we need estimates of the number of adult Hispanics in the United States and of the rates of depression found in epidemiologic studies. Given that Hispanics belong to several major national and cultural groups, epidemiological rates for each of the major groups will need to be estimated.

Population census figures indicated that out of a total of 21,437,000 Hispanics in the United States, 65% (approximately 14 million) are 18 years old or older; 50.2% are male; and 62.6% are estimated to be of Mexican origin, 11.1% Puerto Rican, 4.9% Cuban, 13.8% Central and South American, and 7.6% "Other Hispanic" (U.S. Bureau of the Census, 1991, 2). The population figures of the U.S. Bureau of the Census (1991) in Table 1 were derived by multiplying the estimates for each group by the percent of those 18 years and over for that group and then by the percent of males and females for the same group.

Moscicki et al. (1987) provide six-month prevalence rates for major depression, as follows: Mexicans, 1.0 for males, 3.6 for females; Puerto Ricans, 3.4 for males, 7.4 for females; and Cuban Americans, 1.4 for males, 2.9 for females. Estimates for Central and South Americans and "Other Hispanics" are unavailable, and thus will be conservatively estimated by using the Cuban rates. Rates for residents of Puerto Rico are based on reports by Canino et al. (1987) are 2.4% for males and 3.3% for females. It appears from these official figures that there are well over 100,000 Hispanic men and approximately 300,000 Hispanic women who meet criteria for major depressive episodes during any six-month period in the United States and Puerto Rico. Table 1 presents the results of these estimates.

How many persons with major depression need Spanish-speaking services?

The proportion of Hispanics whose primary language is Spanish varies across groups and geographical regions. The proportion of Mexican-Americans who completed the UCLA ECA interview in

Table 1. Number of Hispanics in the United States and Puerto Rico meeting criteria for Major Depressive Disorder (MDD) during a six-month period.

All Hispanics (100%) (18 years and older)	Males	MDD	Females	MDD	Total MDD
Mexican Origin	4,301,592	43,016	4,099,954	147,598	190,614
Puerto Rican	713,192	24,249	794,614	58,801	83,050
Cuban	442,885	6,200	430,655	12,489	18,689
Central & South American	970,652	13,589	1,038,979	30,130	43,719
Other Hispanic	563,633	7,891	588,991	17,081	24,972
Total Depressed (in the 50 States)		94,945		266,099	361,044
In Puerto Rico (17 to 64 years old)	851,000	20,400	941,000	31,000	51,400

Source:
U.S. Bureau of the Census, Current Population Reports. (March 1991). *The Hispanic population in the United States*, Series P-20, No. 455 (Washington, D.C.: U.S. Government Printing Office), p. 2.

Spanish was 47% (Burnam et al., 1987). In San Francisco, community studies of Latinos have reported that between 70% to 83% (Lang et al., 1982) of respondents chose to complete interviews in Spanish. Assuming that 60% of adult Hispanics in the United States are primarily Spanish-speaking, and thus would need mental health services in Spanish, and using the figure of 361,044 total depressed Hispanics (refer to Table 1), we can estimate that well over 200,000 adult Spanish-speaking persons (60% of 361,044 is 216,626) require treatment for depression in any six-month period within the 50 states. We will use the 200,000 figure as a conservative estimate in what follows.

How many Spanish-speaking therapists are there in the United States?

Figures for psychologists were available from the National Science Foundation (1988). The good news is that between 1977 and 1987, the proportion of employed doctoral-level psychologists who identify themselves as Hispanic doubled. The bad news is that the actual figures were 0.9% in 1977 (300 out of 33,700 psychologists nationwide), and 1.8% in 1987 (1,000 out of 56,400 nationwide). Since

37% of psychologists are in the clinical area, and another 15% in counseling (National Science Foundation, 1988), we can estimate that 370 are clinical psychologists and 150 counseling psychologists for a total of 520 in mental health services.

The assumption that all 520 speak fluent Spanish will now be made in order to account for the fact that figures for other therapists, such as social workers and psychiatrists, were not available to the author and that some non-Hispanic therapists speak Spanish. Otherwise, using the earlier 60% figure of Spanish-speaking persons within the Hispanic community, we would have arrived at 312 as our figure.

How many Spanish-speaking persons with major depression could be treated by the estimated 520 Spanish-speaking therapist?

The newer, brief psychological treatments for major depression requires 20 one-hour sessions. In six months (26 weeks), at 40 hours of patient contacts per week (for a total of 1040 hours), a professional could provide individual treatment for 52 patients. Leaving some time for vacations and such, 500 psychologists seeing 50 patients each could treat 25,000 depressed patients in six months. This would leave 175,000 untreated Spanish-speaking cases of major depression.

Note that the above estimates assume that Spanish-speaking therapists would only treat adults with major depression. No children or adolescents would be seen nor patient with other disorders.

How effective would prevention efforts have to be to be comparable to treatment efforts?

Focusing for the moment only on the 200,000 cases of major depression estimated to occur in any six-month period in Spanish-speaking U.S. adults, we find that a reduction in incidence of as little as one-eighth would match the 25,000 cases that could be treated by all the available Spanish-speaking U.S. therapists.

How large is a reduction of one-eighth in terms of incidence? For illustrative purposes, one could set a one year incidence for major depression at 4% (it is actually somewhat less than that). One-eighth of 4% is 0.5%. Thus, a one-eighth reduction would result in an incidence of 3.5%. It should be clear that even a relatively small prevention effect can easily rival that of treatment, even assuming treatment was 100% effective.

How effective are current treatments for depression?

The most carefully conducted studies of the effect of treatments for depression are randomized controlled trials. It is very likely that such trials provide an over estimate of efficacy. Even with this positive bias results are far from satisfactory.

The sources of positive bias in treatment outcome studies are many. Therapists are carefully selected, systematically trained and continuously supervised. It would be rare for this type of careful selection and supervision of treatment to occur in either public or private clinical services. In addition, a research team is likely to be motivated to obtain good results which are intended to be made public. Most therapists outside the context of research do not keep accurate records of overall effectiveness, and, even if maintained, they generally would not disclose such data. For these reasons, it is likely that therapists in research studies would perform at the upper range of potential effectiveness.

Patients, too, are carefully selected. To begin with, only 20% of those who meet criteria for major depression seek treatment (Shapiro et al., 1984). Furthermore, only a small percentage of patients seeking treatment are likely to choose to become subjects for research studies. The effects of this as a selection factor is unknown, but is likely that researchers select for motivated patients.

From the researcher's side, there is further selection; only about 10% of those who inquire about clinical trials are even scheduled for evaluation (Bellack & Hersen, 1981), and about 36% to 45% of those evaluated are accepted into the trial (DiMascio et al., 1979; Elkin et al., 1989; Murphy et al., 1984;). Often the studies have several exclusion criteria, including physical illness, illiteracy, ability to speak English, and so on. In addition, of course, patients who have trouble keeping appointments will select or eliminate themselves from the studies by never completing the evaluation phase. By the time the preliminaries are over, the study sample is likely to be made up of subjects who are motivated, compliant, relatively well-functioning, probably well educated, and with sufficient resources to afford repeated travel to the clinical site. In addition, they would have enough control over their own personal time to attend sessions. These characteristics are likely to give the treatments being tested a higher likelihood of showing positive effects than if they were implemented with a representative sample of the general public, or with persons who use public sector clinics.

How positive are the reported effects?

Dropout rates from treatments are considerable. Attrition usually produces dropout rates between 20% and 52% (DiMascio et al., 1979; Simons et al., 1984). In the National Institute of Mental Health Collaborative Study (Elkin et al., 1989), 88 (35%) out of 250 randomized patients dropped out; 11 dropped out before treatment started and another 77 during treatment. The proportion of patients who recovered ranged between 36% to 56% for all who entered treatment, and between 51% to 70% for all who completed at least 15 weeks of treatment; sustained improvement is poor, even for those who recover.

In the Murphy and Simons study (Murphy et al., 1984; Simons et al., 1986), out of 95 randomized patients, 25 (26%) dropped out; of 70 completers, 44 (63%) responded; and, out of 44 who responded, 28 (64%) did not relapse within one year. Thus, of 95 randomized patients (after careful screening), only 28 (29%) were remitted at a one year follow-up.

In addition to the low utilization and less than satisfactory effectiveness of treatment, there are some drawbacks and risks to entering treatment. There is the stigma of becoming a "mental patient", which is particularly salient in Hispanic populations, but which has in fact been known to have serious effects on the individual careers. Perhaps the most celebrated example of this occurrence in recent times was the almost forced withdrawal of Senator Eagleton (D-Missouri) as a vice-presidential candidate when it was disclosed he had received treatment for depression. Other risks involved in certain treatments range between relatively minor side effects, all the way to the potential use of antidepressants to commit suicide.

We can conclude, then, that treatment for depression has several limitations and some risks. Even if the 25,000 Spanish-speaking persons were treated, out of the over 200,000 Spanish-speaking persons who need treatment for major depression, only about two-thirds would complete treatment. Furthermore, up to about two-thirds *of those completing treatment* would respond well, and less than a third (approximately 8,000 of the 25,000) would be well one year later.

To match this level of performance, prevention programs would only have to reduce incidence rates by 1/25th (8,000 well cases at one year divided by the original 200,000 Spanish-speaking cases). Reductions greater than this would have a markedly greater impact than all available treatment services. From an alternative point of view,

given that all currently available therapists would only produce 8,000 well cases after one year, if prevention programs were to reduce incidence in Spanish-speaking populations by 20% (40,000 cases), this would be the equivalent of providing five times as many Spanish-speaking therapists as are estimated to be currently available. Seen from this perspective, it seems eminently reasonable to try to develop effective prevention methods which can reach large segments of the population.

Can major depression be prevented?

In a recent review of the state of research and practice focusing on the prevention of depression (Muñoz, 1993, a), it was found that only one randomized prevention trial attempted to test whether incidence of major depressive episodes could be reduced (Muñoz et al., 1987). However, the sample size was insufficient to properly test this hypothesis given the incidence found. A clear priority for future research is the need for more randomized, controlled prevention trials with sufficient statistical power to document reduction in incidence.

There are a number of studies, however, which together give ample evidence that depressive symptoms can be reduced in initially non-clinical populations (Muñoz, 1993, a). It is not too great an extrapolation to suggest that maintaining depression levels below clinical thresholds can reduce the rate of new clinical episodes. The hypothesis that these preventive effects (i.e., fewer numbers of new cases) can be produced by reducing symptoms of depression in non-clinically depressed individuals is definitely worth testing.

The kinds of studies needed to properly answer this question would involve intervention trials with Spanish-speaking populations. On the other hand, professionals able to design the proper interventions and research studies to test preventive effects are in short supply, and Spanish-speaking professionals with these skills are even more rare. The preparation of such individuals should be a major emphasis in graduate training (Muñoz, 1993, b).

Moving forward in time for a moment, we can imagine that such studies have taken place and that they have supported our prediction that incidence decreases when depression symptom levels can be reliably reduced. Would this be sufficient? If professionals are engaged in direct provision of prevention services, and especially if these services are delivered to small groups of individuals, the impact

on incidence would be minimal. We would have the same problems of having limited numbers of professionals with minimal impact on the population as a whole.

What is needed to make prevention feasible is a combination of effective interventions and delivery strategies which can reach the people who need them the most. Utilization rates for mental health services are extremely low for all ethnic groups, but they are even worse for Hispanics. Data from the Epidemiological Catchment Area Los Angeles site (Hough et al., 1987) is probably the clearest comparison of utilization *by diagnosed persons*. It shows that among those with a diagnosable mental disorder, only 22% of non-Hispanic Whites sought care from mental health providers, compared to 11% of Mexican-Americans. Therefore, it is important that comprehensive mental health services not be delivered only to easily available populations. Service delivery methods must be developed which will reach those most at risk, even if that means creating services which can be used at their convenience and in their own homes.

Expanding mental health services beyond the professional office: A framework for research and practice.

Table 2 presents a grid in which the columns represent three chronologically ordered services which ideally ought to be part of a complete mental health care system: prevention, treatment, and maintenance. The rows represent six possible means of service delivery: professionals, paraprofessionals, partner-companions, peer clients, paraphernalia, and print. At present, most resources are devoted to one of the resulting 18 cells: treatment by professionals. Attention needs to be given to the development and evaluation of service delivery methods which involve the other 17 cells (Christensen et al., 1978; Muñoz, 1982; Muñoz, 1980).

Prevention. Prevention refers to interventions for persons who do not meet criteria for clinical disorders, but who are at risk for developing such disorders. The intent of preventive interventions is to reduce the incidence of the disorders.

Treatment. Treatment refers to interventions administered to persons who already meet criteria for the disorder and are intended to cure the disorder or to stop its progression to more severe levels. Early case finding (usually termed "secondary prevention") actually fits into the treatment realm. Treatment interventions aim at reducing prevalence by terminating clinical episodes. There are dis-

Table 2. A Framework for Research: Expanding Mental Health Services Delivery

	Prevention	Treatment	Maintenance
Professionals			
Paraprofessionals			
Partner-companions			
Peer Clients			
Paraphernalia			
Print			

orders, however, which are chronic or cyclical in nature. In these cases, continuing care is required.

Maintenance. Maintenance refers to such types of care in which the aim is to reduce the level of dysfunction, provide support for the patient, and perhaps prevent acute exacerbations of the condition. Maintenance services do not reduce prevalence; in fact, they may actually increase prevalence for disorders which would generally end in early death of the victim. When effective, maintenance services do reduce disability in those affected.

The five additional service delivery methods need some description, and they have been given alliterative names as a mnemonic device (Christensen et al., 1978):

Paraprofessionals are here defined as persons with specialized training in the administration of specific interventions but who do not have a degree and license that permits them to engage in independent mental health practice. They are, however, paid for their work. Such persons might have a bachelor's degree in psychology and have training in teaching deep muscular relaxation procedures to primary care patients about to undergo anxiety-producing procedures.

Partner-companions may be defined as volunteers who share knowledge gained through their past life experiences with people who are currently facing similar experiences. For example, these might be immigrants who have been in the U.S. for 10 or more years. Additionally, they are individuals who meet with groups of recent immigrants to provide information, support, and advice on how persons cope with this stressful time. Partner-companions are clearly in a helping role.

Peer-clients are defined as persons in mutual help groups. All participants in services of this nature would be considered to be "in the same boat" and the source of preventive or therapeutic effect comes from sharing experiences with others in the same situation. For example, a support group for Hispanic freshmen at a university would fit here. There are several successful examples of this level of intervention such as Alcoholics Anonymous.

Paraphernalia. Paraphernalia refers to equipment, gadgets, the mass media, and other adjuncts by which information, individualized programs of self-change, and interactive training methods can be administered. For example, a television program focused on ways to reduce depression level would fit here (Muñoz, Glish, Soo-Hoo & Robertson, 1982). Computer applications for prevention and treatment are an untapped source of individualized interventions, which will gradually come into their own. It is important that such advances be adapted to Spanish-speaking populations, to pre-literates, and to persons unable to attend services away from home, for example, because they provide child care to grandchildren.

Print refers to the written word, illustrated manuals, and other sources of information and guidance. Such materials are widely available for English-speaking persons, and they need to be developed for others (Muñoz, 1982). More importantly, materials designed to have preventive effects in the mental health area need to be carefully prepared and evaluated.

Proposed Framework and Implications of Adjuncts

The are many underlying ideas in the format for the proposed framework. The implications of the adjuncts included in it are as follows (Christensen, 1979):

1. Adjuncts are more plentiful and less costly than professionals.
2. Adjuncts can maintain greater contact with clients in their natural environments. This is especially true for paraphernalia and print, which can be used at the individual's convenience.
3. Professionals, especially Spanish-speaking professionals of whom there are still so few, should devote significant time to supervision, program development, training, diagnosis, and evaluative research, and not just to direct services.
4. Evaluation is essential at all levels of the proposed framework. It must not be assumed that any one level is effective for any problem and any population. Intervention at one level will not necessarily be effective when applied at another level of the framework. It is pos-

sible that some lower levels in the framework will be more effective and certainly more efficient than higher levels. For example, mass media approaches, even if proportionately less powerful than direct personal services, might have more impact on the population given the greater number of persons who are affected by it. A television intervention, in this instance, which produces a 2% reduction in incidence for an audience that includes 100,000 people at very high risk, has more numerical impact (2,000 fewer cases) than for a small group intervention with 50% reduction in incidence which is only available to 200 people at the same level of risk (100 fewer cases).

5. A lower level adjunct (i.e., a less expensive one) can be used as a minimal standard against which to evaluate interventions higher in the framework. Since each level may be useful for different segments of the population, many more persons will be effectively served by the more plentiful and less expensive adjuncts. The more difficult cases will still need to be seen by well-trained professionals. Functions which will gain importance for the professional include developing and providing the adjuncts, matching clients and services and evaluating the effectiveness of the adjuncts.

Is there any evidence that the use of adjuncts is feasible and that it can produce measurable effects?

Most mental health studies focus on the effect of professional interventions on the treatment of disorders. There are some research projects, however, which have published findings relevant to the proposed framework.

Paraprofessionals. The Hispanic Social Network Prevention Intervention study recruited natural caregivers in a Mexican community and trained them in the delivery of cognitive-behavioral methods to prevent depression (Vega et al., 1987). The process of training and the delivery of the intervention went relatively well. Results indicate that women with low levels of depression at the beginning of the study benefitted most from the intervention.

Partner-companions. Although I am not aware of studies actually showing measurable mental health effects, there are several ongoing programs which routinely use this level of intervention. Rapport et al. (1979) reported on the successful use of college students as companions for juveniles on legal probation. The students were trained to provide social learning oriented behavioral contracting and advocacy skills. The amount and seriousness of police contacts were markedly reduced for the experimental group when

compared to a randomly assigned control group. The Big Brother and Big Sister programs pair responsible adults with children in high-risk situations. The popularity of the program shows that the idea is definitely feasible. An evaluation of effect would be interesting, perhaps using waiting lists as controls. Widow-to-widow programs have also been put into practice in which newly-bereaved women are contacted by women who have undergone the experience of losing their spouses, and who can offer ongoing support (Silverman & Murrow, 1976). I do not know whether such programs are available for the Spanish-speaking.

Peer-clients. Alcoholics Anonymous, AA, is considered an important resource among professionals working with alcoholics. As with most types of treatment approaches, it requires acceptance of its underlying philosophy, namely the twelve-step process; thus, it is not appropriate for everyone. The great number of mutual support AA groups across the nation, (including Spanish-speaking AA groups), however, speak well for the feasibility of the idea. There is also a large self-help movement (Riesman et al., 1986), which suggests that large segments of the population are willing to participate in such groups. Active participation in such groups has been reported to have positive effects on mental health variables (Lieberman & Borman, 1981).

Paraphernalia. Television messages have been shown to have measurable effects on psychological variables. Behavior and mood showed intended changes in a randomly selected sample of San Francisco residents who had seen a series of spots on how to manage one's mood (Muñoz, Glish, Soo-Hoo & Robertson, 1982). Alcohol consumption was reduced through television advertising in Australia for respondents who had been sensitized to the ads with a letter (Barber et al., 1989). Additionally, computer-administered cognitive-behavioral treatment produced significantly greater decrease in depressive symptoms than a waiting-list condition and no differences from therapist-administered cognitive-behavior therapy (Selmi, 1990).

Print. Mildly and moderately depressed older adults received cognitive, or behavioral bibliotherapy or delayed treatment. Both active treatments showed significant decreases in symptoms compared to the delayed condition and no differences from each other. Gains were maintained at six-month and two-year follow-ups (Scogin et al., 1989; Scogin et al., 1990).

Recommendations

To address the problem of depression in Hispanics, interventions which go beyond treatment by professionals must be developed and evaluated. Specifically, it is crucial to focus on prevention and on the development and implementation of adjuncts to expand mental health service delivery.

It is particularly important that the advances being made in terms of the use of technology in mental health be made available to the Spanish-speaking population from the outset. It is important not to continue playing "catch-up" in this area, as in most others. It is condescending to suggest that Hispanics can not respond to the most technologically advanced methods of intervention. What is needed are professionals committed to adapt technology in a culturally relevant manner, as well as devising ways to expose Spanish-speaking consumers to the technology so that they have a chance to learn how to use it.

For example, with the use of analog-to-digital "speech boards," computers could be used to routinely screen primary care patients for depression. This may be accomplished by having the computer present the screening questions verbally and by programming the computer to accept the person's verbal responses (Starkweather & Muñoz, 1989). This method would be particularly helpful because medical staff are usually too busy to add another screening procedure to their protocol. It would be essential for monolingual, Spanish-speaking patients in clinics where there are few or no Spanish-speaking providers. The results of the screening procedure could be printed out and made available to the primary care provider. Even if providers could not intervene, at least the condition would have been identified and the process of locating appropriate help would begin. For mild and moderate cases of depression, interventions modeled after the computerized or bibliotherapeutic interventions described above could be made available to such patients (Selmi et al., 1990; Scogin et al., 1989; Scogin et al., 1990).

The introduction of new services is always problematic, and prevention is no exception. Preventive interventions are most likely to be accepted if combined with treatment services. Consider the following scenario: combined prevention and treatment services in a primary care clinic could be established and maintained under the following conditions. Each primary care clinic serving Hispanics

could routinely provide screening and triage for major depression. Such screening could be accomplished with paper-and-pencil self-report depression scales, such as the CES-D, *Center for Epidemiological Studies Depression Scale* (Radloff, 1977), or the BDI, *Beck Depression Inventory* (Beck et al., 1961), or with computerized versions of such scales described above.

The screening system would identify three groups:

1. "Depressed," or those with high enough depression scores to be likely to meet clinical criteria for depression and thus in need of professional evaluation. It would be possible to set up a computerized system, which automatically checks for the presence or absence of symptoms for major depressive episodes, melancholia, or suicidality, if a person scores above a certain cut-point on the screening scale. Although final diagnosis and disposition would still require a professional interview, the Spanish-language diagnostic interview could certainly be computer-assisted (Aguilar-Gaxiola, 1991).
2. "High risk" group infers that it is unlikely to currently meet criteria for clinical depression, but there are a sufficient amount of risk factors to recommend preventive intervention. Risk factors might include personal history of depression, family history, high symptom level, and high number of stressful life events.
3. "Low risk" group infers that it is neither currently depressed, nor associated with high risk factors. This group would be left alone once the screening procedure has been validated.

Once the screening procedure has taken place, triage would occur. Patients in the "depressed" category would be seen by a mental health professional, and diagnosed and referred to emergency services if acutely suicidal, psychotic or unable to care for self; outpatient treatment (if patient agrees); antidepressant treatment by the primary care provider (if the patient refuses to see a specialist); and, if the patient has mild to moderate levels of depression and is not suicidal, to any of the "adjuncts" discussed in the above framework, such as: paraprofessional instructor on mood management, volunteer support person, mutual aid (self-help) group, audio or video materials on mood management, self-administered computerized treatment, or printed self-help manuals. Patients in the "high risk" category would be given information about courses in mood management, support groups, audio or video materials, computerized preventive self-change programs and printed depression prevention programs.

The development and evaluation of such interventions will require professionals trained in a number of areas: high risk factor research; outreach methods to attract and intervene with populations at risk, rather than merely with available populations; development of interventions; computer applications; evaluation research; developing comprehensive programs across mental health; primary care; and occupational, economic, and educational settings. In order to serve many Hispanics, such professionals will need to also be bilingual and bicultural. There is much to be done.

A Parting Thought-Problem

Currently, most cases of depression are not being detected, even by primary care professionals (Perez-Stable et al., 1990). Even so, the mental health treatment system, especially in the public sector, is unable to meet the demand. Long waiting lists are very common. What will we do with all the cases that the screening process described above will uncover? Deciding *not* to find the cases is not an acceptable solution.

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12

Preventing Depression in the Hispanic Community: An Outcome evaluation of Projecto Bienestar

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The idea that the mental health of this nation is a legitimate public health concern, and that services should be organized on a very broad scope, was formally recognized in the Community Mental Health Centers Act of 1963. President Kennedy, in his report to Congress in 1963, issued an inspiring challenge to take up a determined "assault" on mental illness by providing universal access to services and by fusing new knowledge and expanded resources for achieving bold and innovative interventions (Congressional Record, 1963). Prevention of mental disorder was now seen as an attainable goal and as a core element of comprehensive community mental health planning. Unfortunately, there existed a scarcity of theory or community experience on which to model new community-based preventive interventions (Vega & Murphy, 1990). As a result, prevention was widely recognized as a laudable activity, but it sparked little practitioner interest or serious research.

In 1978, experts were convened by President Carter to review the state of the art in mental health services. They found little progress in the development of prevention programs within the community mental health experience. In assessing the impasse, *The Report of the Task Panel on Prevention* (Presidential Commission, 1978) called for a paradigm shift toward primary prevention. The change of focus was necessitated, according to the panel, because it was not deemed desirable or possible to meet the mental health needs of the nation by traditional clinical treatment. According to the Report, the critical point is that while all behavior has an underlying physiological basis, disturbed behavior need not imply an underlying pathological organic process. Therefore, primary preventive interventions aimed at carefully selected risk groups were urged in order to strengthen coping capabilities. Presumably, these interventions would have the effect of lowering the incidence of mental disorders

within these targeted groups. Of course the repeal of the Community Mental Health Centers Act in 1981, and the initiation of the Block Grant Program, dimmed any hope that prevention might be taken more seriously within the community mental health movement (Public Law, 1981). Nevertheless, in the early 1980's, the National Institute of Mental Health committed itself to encouraging the development of prevention trials in a variety of settings and for diverse risk groups.

This historical summary provides a context for understanding how Projecto Bienestar came into existence, since it was funded as an unsolicited research application by the Center for Prevention Research of the NIMH, as part of an initiative which also included establishing prevention research centers and enumerating prevention activities within state departments of mental health. To our knowledge, Projecto Bienestar remains as the only example of a large randomized trial conducted in the Hispanic community. The rekindled interest in prevention at the NIMH was met with apprehension by many researchers and practitioners. The disenchantment was grounded in the belief that resources would be pulled away from clinical research and services when not enough was known about the etiology of psychiatric disorders to justify preventive interventions, and what was known about etiology seemed to make primary prevention unfeasible or impractical. As a result, to these skeptics, prevention efforts were, and are, a waste of time and money. Curiously, traditional psychotherapy and even psychopharmacology were not attacked on similar grounds although they suffered similar limitations. Criticism notwithstanding, prevention trials went forward revealing much about the science and the practice of mental health intervention. This paper is devoted to presenting an outcome evaluation of Projecto Bienestar. However, before doing so, it would beneficial to briefly inform readers about the intellectual guideposts that led to the development of Projecto Bienestar.

The Intellectual Context for Prevention Research

Emile Durkheim (1951), in his landmark 19th century study of suicide, noted an association between social change, personal adaptation and severe mental distress. Indeed, a fundamental postulation of Durkheim was that the movement of individuals away from environments characterized by social homogeneity of behavioral expectations and values, and their insertion in complex environments rife with conflicting normative expectations, were personally disor-

ganizing. The notion that environmental factors could have a pervasive effect on the behavior of individuals, especially in areas undergoing rapid changes, were again borne out by the social area studies of Faris and Dunham (1939) as well as a host of other Chicago-based researchers in the 1920s and 1930s. These investigators discovered that certain areas of Chicago were socially disorganized and disproportionately characterized by mental deviancy, alcoholism and criminal behavior. Moreover, it was found that these trends persisted despite changes in the ethnic and racial composition of these areas over time, suggesting an etiologic role for environmental factors in nurturing or sustaining pathological behaviors.

The advent of large community surveys, such as the *Midtown Manhattan Study* in the mid-1950's, revealed an inverse relationship between socioeconomic status and psychological distress (Srole et al., 1962). This finding soon became axiomatic in the field. Researchers were convinced that environments could contribute to producing mental illness even if empirically demonstrating how this process occurred remained unclear. In 1962, Rodgers called for general preventive measures directed at the determination and control of the underlying pattern of environmental relationships. This belief was reflected by numerous writers during this period which provided a philosophical grounding for the federal community mental health center movement undertaken in 1963 and was reflected in naming some state mental health hygiene agencies "Departments of Mental Hygiene" (Wagenfeld et al., 1982).

An important development was the formulation of social psychological stress theory. Although the work of Selye (1956) on the General Adaptation Syndrome remains controversial, there is no doubt that this body of research had far reaching implications for mental health theory about personal adaptation. Despite the fact that Selye did not explicitly link emotional and cognitive factors to stress, his model opened the door to conceptualizing social psychological stress models. Subsequent efforts include, for example, the extensive and continuing research about coping processes undertaken by Lazarus (1966), or the more recent work of Pearlin and Schooler (1978), which focused on isolating persistent strains and coping responses in various domains of life activity. Stress process researchers have focused on the transactional nature of environment and personal adaptation and opened the door to public health interventions based on selective strengthening of coping resources for carefully selected risk groups (Goldberger & Breznitz, 1982).

There are two additional developments that also form part of the intellectual heritage of contemporary intervention research, and these are closely linked to stress process research. The first is the extensive and complex literature about social networks and social support. Although there are many aspects to this research, perceived support is widely accepted as a coping resource which helps offset the debilitating effects of environmental stress (Dean & Ensel, 1982; Gore, 1969). A second major development was the refinement and operationalization of social learning theory by Bandura (1977, 1982), which underscored the importance of social reinforcement in behavior change moderated by the agency of self-efficacy. Key to behavior change was the availability of supporting individuals to provide modeling of new behaviors and a setting for rehearsing new behaviors and receiving social approval for improving and maintaining performance levels. These two literatures were essential for facilitating the era of community based preventive interventions.

Nevertheless, despite the advent of this formidable body of knowledge, it is of utmost importance to note that little attention has been paid during the previous three decades to the role of cultural factors in the development of intervention theory. As result, there is a tendency to use "off-the-shelf" interventions models and materials without sufficient regard for cultural expectations or practices. This was the pitfall that Projecto Bienestar investigators took great care to overcome in all phases of data gathering and intervention tasks.

Conceptualization of Projecto Bienestar

Despite the important contributions to Projecto Bienestar from the literature noted above, there remained serious gaps in knowledge required for conducting this intervention. The first aspect of this was the selection of a risk group for intervention. Previous epidemiologic studies conducted in California by Vega et al. (1984, 1985) identified low income, immigrant women of Mexican heritage as consistently at high risk for psychophysiological distress and depressive symptomatology. Therefore, this cohort was selected for intervention.

A second aspect was the inclusion of extensive ethnomethodological research completed by Valle and Mendoza (1978) and Valle (1985) on the cultural characteristics of Hispanic natural support systems and natural helpers. This research was sufficiently comprehensive to permit social mapping of Hispanic communities and

identification of various types of natural helpers, termed *servidoras* by these researchers. This expertise permitted casting the intervention within a culturally appropriate set of techniques for accessing and intervening with subjects, although there certainly remains much to be learned in this regard (Vega et al., 1987). In essence, their findings provided a method for cultural validation of all aspects of the study.

The third aspect was derived from the necessity to identify personal risk factors linked to depression in the target group and to determine which of these could be modifiable using a structured educational intervention. Although epidemiologic data was available from previous studies, this research failed to collect a wide spectrum of information needed to understand psychosocial processes associated with risk in this population. For this type of information it was necessary to consult experts who had extensive clinical experience within low income Hispanic communities in California. The most influential of these for this study were Dr. Marvin Karno and Dr. Teresa Boulette.

In brief, the profile of risk that emerged was rooted in a complex of household and extra-household factors. Women in the target group (35 to 50 years of age) were entering a period of increasing burdens with diminishing resources; in short, high demand and low control with a propensity toward personal powerlessness. The demand emerged from chronic economic and social marginality characterized by husbands with unsteady employment or physical handicaps which reduced income and by the need to provide for large families, which included meeting the economic and child care needs of both their own households and those of adult children. Since these women are almost uniformly Spanish language monolinguals, and often their social role has been limited to homemaking, they are frequently at a disadvantage in dealing with family business outside the home, especially when this entails negotiating with English-language bureaucracies. Moreover, despite the fact that these women are often physically isolated from social contacts except with family members and a few neighbors, they will be confronted by the necessity of stepping outside their accustomed domestic situation and into a larger community arena, in order to access resources, seek employment, or to solve various types of problems. In summary, there are two primary reasons for increasing demands on immigrant women in this cohort; in many instances, there is a decreasing viability of husband

as head-of-household (or total absence of a husband in household) and often an overall increase in the number of problems that require attention in multigeneration extended families with low incomes.

The availability of the right types of social support, including informational, resource redistribution, transportation, translation assistance, and emotional support are all key aspects of this situation. Whereas various types of tangible assistance are required to solve everyday problems in living, emotional support is the most important for maintenance of morale. And, as noted above, emotional support also facilitates the introduction of new information and behavior change.

The intervention was postulated as an "early preventive intervention" due to the difficulty and potential inappropriateness of using more traditional public health nomenclature, for example, "primary prevention" for mental health problems such as depressive symptoms that have no clearly discernable point of onset. On the other hand, there is a an important distinction between preventing the onset of depressive symptoms among those who are asymptomatic, or nearly so, and intervening with those suffering from severe and chronic depressive disorder. Projecto Bienestar attempted to reach women who were either asymptomatic or only experiencing mild symptomatology at the outset of the intervention. The aim was to prevent depressive symptoms from onsetting or increasing among women experiencing risk of depression. The risk-proneness of these women had been established in previous epidemiologic studies. In fact, the first stage household screening for Projecto Bienestar yielded a mean CES-D score of 16, which is the usual "caseness" cutpoint for this measure.

Intervention Design and Procedures

The objectives of Projecto Bienestar emulate the general intervention model described by Roskin (1982) which include (a) modification of the environment as it distresses and supports, (b) provision of opportunities for strengthening individual capacities for dealing with interpersonal relationships, (c) understanding and coping with anticipated critical development tasks, and (d) understanding and coping with unanticipated stressful life situations.

In formulating the intervention process, several program components were needed in order to increase the women's sense of empowerment. These included emotional bonding, ego strengthening,

and introduction of new behaviors and skills needed for solving the types of redundant problems seen by immigrant women. Guiding this process would be social learning theory; especially its operationalization by Bandura (1977, 1982) which requires development of constituent competencies and strong percepts of self efficacy.

A three group design was used which included two intervention groups and a control. One intervention, referred to throughout the remainder of this chapter as the "E1" modality, was a one-to-one intervention carried by natural helpers (*servidoras*) trained and supervised by Projecto Bienestar staff. The E1 modality attempted to replicate the protocol and cultural style of natural helpers found in the low income communities of Southern California. The El was called the "Linkperson" modality. Natural helpers were termed *servidoras* in this study using the original terminology of Valle and Mendoza (1978). The "E2" modality, referred to as the *Merienda*, was a peer group intervention organized and led by a *servidora*. Both the El and E2 used thematically similar educational materials, albeit with techniques adjusted for the differences in intervention contexts, e.g., group versus one-to-one. Each intervention was built around a model of 12 intervention contacts. However, some variation in this standard was inevitable in a naturalistic setting. For example, some E2 groups continued to meet even after *servidora* discontinued contact with them. The third group was a control that no had no structured intervention, although the cohort maintenance techniques required periodic mailings over an extended period of time; this could be considered a low powered intervention. Readers desiring more information about the content of the intervention are encouraged to consult previously published materials by Vega and Murphy (1990) and Vega et al., (1978).

Design of the Study

The research site in San Diego County is adjacent to the U.S.-Mexico border. The extreme southwestern portion of the county is situated directly across from Tijuana, Mexico. In order to develop a sampling frame, all block groups with a Hispanic population of 25% or greater were selected and most of these were located along a 16-mile, north/south residential corridor which starts in downtown San Diego and ends in San Ysidro at the international border. This is a mixed land-use region combining residential, commercial and industrial uses in a wide strip paralleling the Pacific Ocean coastline.

The 1985 population of San Diego County was 2,041,300. Approximately 14.8% (302,112 persons) were of Hispanic origin. These estimates do not include undocumented aliens. Project enumerators went door-to-door within selected block groups in order to identify eligible women, often covering these areas twice to assure complete coverage.

The sample was identified in a two-stage screening process. Stage one involved screening approximately 40,000 households in block groups within the sampling frame in order to identify women who met criteria for inclusion in the study. These criteria included ethnicity (Mexican-American), female gender between 35 to 50 years of age and low household income. The screening process was designed to include both immigrant and non-immigrant women. However, sampling only high density Hispanic block groups resulted in over 90% of enumerated women (N = 2157) being immigrants. An additional effort was made to omit all women with less than two years in the United States because of the confounding effects of early immigrant adaptation on our dependent variable, depressive symptoms.

Table 1 details the design steps and subject loss at each stage. There were several reasons for subject loss before the second stage of screening. As seen in Table 1, 465 women were eliminated from the study by using the cutpoint of 23, which represented one standard deviation above the mean on the criterion instrument, The Center for Epidemiologic Studies-Depression measure (CES-D) (Radloff, 1977). Although Projecto Bienestar was designed to be an early preventive intervention, the mean of the sample was so high that the investigators decided to use a normative distribution exclusion procedure, thereby eliminating women with mean scores over 23 on the CES-D. This approach was intuitively appealing because previous research had found that only people in that symptom range tended to exhibit chronicity of their depressive mood over time. Moreover, the second stage screening involved using the Diagnostic Interview Schedule (DIS) (Robins et al., 1981), including sections on major depression and anxiety disorders, in order to exclude from the sample women who had already experienced these problems sometime in their lives. First stage screening also involved eliminating women who were suffering from life threatening illnesses, or from post traumatic stress disorder following the McDonald's restaurant massacre in San Ysidro that occurred during the earliest phase of Projecto Bienestar.

Ultimately, 800 women were interviewed face-to-face in the second stage of screening which constituted the baseline measurement for the experimental design. As noted in Table 1, an additional 134 women were removed from the sample because they met caseness criteria on the DIS, thereby leaving a residual sample of 655 women suitable for randomization into the three groups. It should be noted that two women died during the study and were excluded from the data base thereafter. Because we anticipated differential attrition from groups, random assignment to groups was weighted with the

Table 1. Subject Loss from Screen to Randomization

		Numeric Loss	Numeric Balance	Loss as Percentage of Previous Balance
Total Enumerated		–	2157	–
Eligibility screens		500	1657	23.2
CESD > 23		(465)		(21.6)
PTSD		(13)		(0.6)
Income > Md		(22)		(1.0)
Project Criteria		106	1551	6.4
Geographic Location		(94)		(5.7)
Data Quality		(12)		(0.7)
Subject Reasons		751	800	40.4
Moved		(239)		(15.4)
Could not contact to arrange interview		(254)		(16.4)
Refused		(258)		(16.6)
No Reason Given		(120)		
Reasons Given (percent)		(138)		
No Time	21			
Not Interested	19			
Work Obligations	28			
Family Obligations	15			
Husband Refuses	14			
Other	13			
DIS Case Screen		(134)	655	(16.8)
Randomization to Groups		N	Percent	
Controls		199	29.9	
E1		210	31.5	
E2		257	38.6	

expectation that the greatest subject loss would occur in the E2, or *Merienda* intervention. This was due to participant-burden involved in the E2 modality which required women to travel to meeting sites. It was only after randomization that women were asked to participate in a specific experimental modality. This study used a "random invitational design" where women were approached "cold" and asked to take part in an intervention study of which they had no knowledge until contacted at their front door by project screeners. They were not aware that they were in a "risk group." They were also unaware of the conditions for their participation until after random assignment. No doubt it is obvious to the reader that this aspect of the study was disturbing to the investigators. Unacculturated Mexican-Americans, after all, are well known for underutilizing mental health services.

The outcome interviews were also conducted on a face-to-face basis six months after the termination of intervention activities. The essential outcome analyses are summarized below; however, readers wishing to bypass this technical discussion can proceed directly to the section entitled "Summary of Intervention Effects".

Experimental Mortality

The effective randomized N's were as follows: Controls (C) = 196, (Linkperson (EI) = 203, and *Merienda* (E2) = 254. Of the living subjects randomized at baseline (N = 653), 78% completed the outcome interview approximately one year later. Among the 22% (N = 146) women lost, two thirds (65%) had moved from the area and could not be located while the remaining third refused the outcome interview. No significant difference in case loss rate among the three modalities was found. Outcome interview completion rates by modality were as follows: C = 79%, E1 = 76%, and E2 = 78%. Discriminant analyses where performed to examine possible differences between those women who were successfully reinterviewed for the outcome measure and those who refused or had moved out of the area. No combination of a large set of demographic and psychosocial variables was found to predict successful reinterview. Also, no significant difference was found among the reinterviewed, moved, and refused interview at the time of the baseline CES-D which was the primary outcome variable. Given these observations pointing to the absence of mortality bias, our intervention evaluation examines only that 78% subset for whom both baseline and outcome measures are available.

Participation in the Intervention

Under our protocol, prior to randomization, we obtained from every eligible subject a verbal agreement to participate in any one of our three modalities. Although we projected that 20% of El and 30% of E2 could or would not follow through on this agreement, the actual failure rate was higher than anticipated. The intervention in both modalities was designed to be administered over 12 sessions. For presentation and analyses purposes, we converted level of participation into proportions to yield the following trichotomy: "0 or none," "0.08 to 0.49, or more but less than half dropout", and "0.50+ full participation."

The data appear in Table 2 where it can seen that 31% of El women did not participate, 18% "dropped-out" (0.08-0.49), and 51% participated at the "full" level of one half or more of the scheduled sessions. In the E2 modality, the rates were 52% with "none," 18% "dropouts" and 30% "full" participation. Given the relatively large proportions of women who received little or no intervention, our evaluation analyses takes participation into account.

Baseline CES-D means by modality and level of participation in the intervention also appear in Table 2. Among the El women, it can be seen that non-participants show the lowest baseline CES-D mean (8.0) and full participants the highest (9.9). While the differences are not statistically significant, they do suggest a pattern of self-selection whereby women with higher CES-D symptom levels are more likely to participate. A more pronounced and statistically significant pattern of baseline CES-D differences emerges in E2. Self-selection appears to have taken place in the E2 modality as evidenced by the low CES-D mean of 5.6 for women who dropped out, compared to the means of 11.3 in the "full" and 9.2 in the "none" participation categories. Unquestionably, self-selection poses a serious problem for the evaluation and makes it apparent that its potential to distort outcomes must be taken into account. The fact that participation level is associated with the baseline CES-D score requires that comparisons, which examine only participating women, make adjustments to render them more comparable to controls.

Given self-selection into intervention participation on the baseline level of CES-D, extensive analyses were performed in an effort to find other predictors of participation. As it turned out, no significant predictors emerged for El participation and only very few for E2. The profile of "full" participation in the E2 modality suggests that these women were younger, less acculturated, and more

Table 2. Participation by Modality and Baseline CES-D

Modality	None	.08–.49	.50+	Total
E1 percent	31	18	51	100
number	(63)	(37)	(103)	(203)
Baseline CES-D	8.0	9.1	9.9	9.2
E2 percent	52	18	30	100
number	(133)	(46)	(75)	(254)
Baseline CES-D	9.2	5.6	11.3	9.2
Control				
number	–	–	–	(196)
Baseline CES-D	–	–	–	9.5

recent immigrants. Both discriminant analysis and multiple regression techniques were employed in our effort to construct a multivariate profile of participation in the intervention. Non-linearities and the fact that participation may be inherently discrete rather than continuous made regressions of continuous participation level on the predictors difficult to interpret, hence, unsatisfactory. Intuitively, operationalization of participation level as a continuous variable is problematic, inasmuch as zero participation and a dropout after one session are more readily viewed as nominal types rather than as points on a continuum. Regardless, we observed that imposition of a metric, although analytically appealing, was conceptually problematic. This being the case, discriminant analysis was employed in an effort to construct a multivariate profile of participation for the two experimental groups.

Separate analyses in El and E2 using the "0", "0.08-0.49" and "0.50+" trichotomy failed to yield two statistically significant functions, which could differentiate the three categories. This is not surprising given the dearth of participation predictors. A series of two-group, single function discriminant analyses were also attempted. Again, we found no set of variables which could improve classification on participation level significantly beyond prior probabilities. Given the large list of demographic and psychosocial variables examined, our failure to find clear differences among full participants, dropouts, and no-shows, could, at least in part, be due to the homogeneity of our sample (i.e., low income, age 35-50, immigrant, low education, Spanish speaking, and with fairly low level of acculturation).

Analyses and Results

Our intervention was through a simple three-group, pre-post test randomized experimental design with no provision for level of intervention or participation. Moreover, to enter these considerations after the fact immediately casts the evaluation into the realm of quasi-experimental design. Our evaluation logic will be to advance from the most conservative stance to those requiring more assumptions and caveats. In our most conservative analyses, we compare all women in El or E2, regardless of participation, to controls in order to determine if any intervention effect on participants is strong enough to "carry" non-participants. With the exception of subject loss due to failure to complete the outcome interview because they "moved" or "refused", these analyses will most closely approximate a true randomized experimental design. It should be recalled that no apparent bias with respect to outcome interview status was observed.

The next less stringent analyses will examine subsets of women based upon their baseline CES-D score while the last and least stringent analyses will control for both baseline CES-D and level of participation in the intervention. The most convincing case for intervention effect would derive from the most conservative analyses which do not account for actual participation. Recalling that only 69% of E1, and 48 percent of E2, respectively, participated in one or more of the 12 sessions, the intervention effect must be quite strong for these subjects to "carry" their entire group.

Given the possibility of outcome on baseline CES-D non-linearity, and the observed potential for baseline CES-D by modality interaction, our basic analytic model addresses both problems. Employing multiple regression, our model takes the following form:

$D_2 = b_0 + b_1 (D_1) + b_2(E) + b_3 (E) (D_1) + b_4(D_1)^2 + b_5(E) (D_1)^2$

where D2 represents outcome CES-D, E = modality with Controls always coded "0" and Experimentals 1. Our first test is of the partial slopes associated $(D1)^2$ or non-linearity (b_4 and b_5). For simplicity, the model presented anticipates outcomes since no polynomials of higher than second degree were found to be either significant or meaningful. We next test for covariate (i.e., baseline CES-D) by modality interaction (b_3 and b_5) then proceed toward the appropriate test for intervention effect or outcome description.

Experimental Design Outcomes

Table 3 presents outcomes of our first most conservative tests in which all subjects, irrespective of level of participation for whom an

outcome was obtained, are compared between Experimentals and Controls in separate analyses for E1 and E2. In the E1 outcomes, it can be seen that the test for non-linearity (Lines A) is non-significant as is the next test for linear modality by baseline interaction (Lines B). Given these outcomes, our test model becomes a simple analysis of covariance with baseline CES-D as the linear covariate (lines C). The partial slope ($b = -1.73$) associated with El modality suggests a weak (baseline CES-D adjusted) intervention effect in the direction of lower outcome CES-D scores for the El modality. This slope can be read as an adjusted mean difference of 1.73 points between controls and E1. The probability of $p < 0.145$ associated with this difference does not meet the conventional level for statistical significance ($p < 0.05$). Although in the direction of a salutary intervention effect, the effect is not large enough tobe conclusive.

The outcomes for the E2 modality in the lower portion of Table 3 are more complex. The first test for non-linearity of outcome on baseline CES-D (Lines A) yields what we must treat as a significant test probability of $p < 0.058$. The next test (Lines B) for non-linear modality by baseline CES-D interaction (non-parallelism) is also significant ($p < 0.064$). These outcomes dictate separate non-linear equations for Controls and E2 presented on Lines C. Here, we see that the non-linear term for Controls is non-significant ($p < 0.221$) while that for E2 is significant ($p < 0.037$). Line D presents the linear equation for Controls. To illustrate these outcomes we present Figure 1 which plots the fitted values deriving from the final equations for Control and E2 women. Here it can seen that E2 shows lower outcome CES-D than controls only in the lower and upper ranges of baseline CES-D and that they are higher than controls through the middle range. To further explore these outcomes, the analyses were repeated for only those E2 women who attended one-half or more of the sessions (i.e., full participants). A similar non-linear interaction emerged suggesting intervention effects only among those E2 women with lowest and highest levels on baseline CES-D. Given the non-linear modality by baseline interaction, a simple test and conclusion about intervention effects in this modality is not possible. Our observation that a similar non-linear interaction obtained when observations were censored to include only full participants in the El modality, suggests analyses within ranges of baseline CES-D.

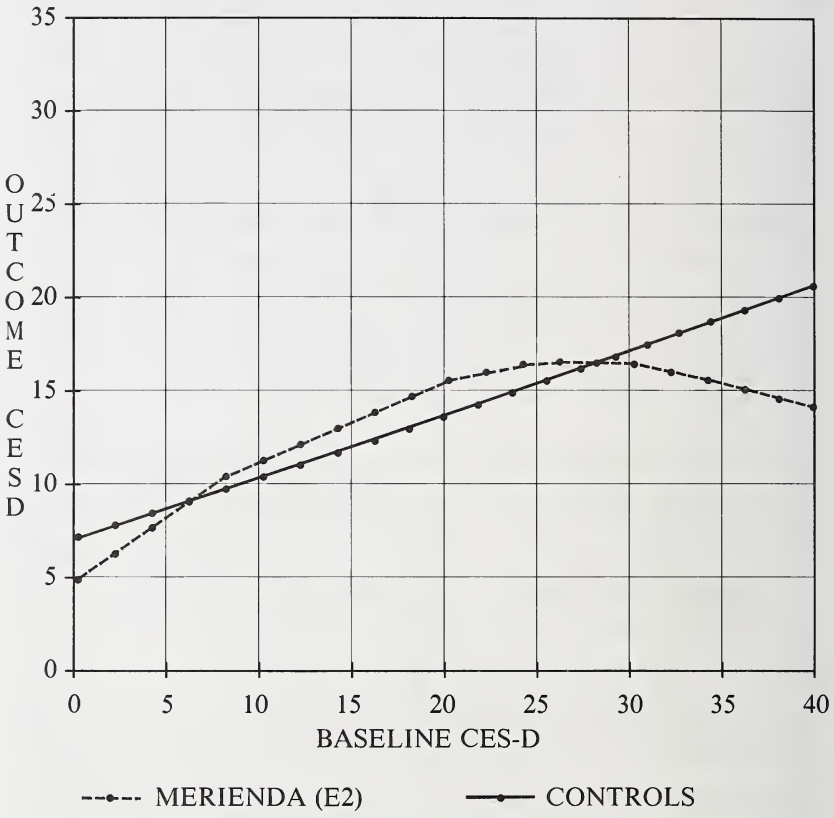
It is important to note that 53% of our randomized subjects had baseline CES-D scores of 0-6, 22% obtained 7-15, and 25% achieved

Table 3. Multiple Regression Tests for Intervention Effects on Outcome CES-D by Intervention Modality

Test	b_0	b_1(D1)	b_2(E)	b_3(E) (D1)	b_4(D1)^2	b_5(E) (D1)^2	Total R^2	Test R^2 Change	Test $p <$	N (C,E)
Linkperson (E1) Modality										
A. Non-Linearity of CES-D2 on CES-D1	8.31 (1.41)	0.02 (0.26)	−2.87 (1.97)	0.37 (0.35)	0.01* (0.01)	−0.01* (0.01)	.081	.005	.429	(155,155)
B. Linear Interaction of E1 by CES-D1	7.35 (1.30)	0.33 (0.09)	−1.66 (1.65)	−0.01* (0.12)			.082	.001	.950	" "
C. E1 Intervention Effect (Simple Ancova)	7.39 (1.01)	0.33 (0.06)	−1.73* (1.19)				.085	.006	.145	" "
Merienda (E2) Modality										
A. Non-Linearity of CES-D2 on CES-D1	8.31 (1.37)	0.02 (0.25)	−3.43 (1.85)	0.81 (0.34)	0.01* (0.01)	−0.03* (0.01)	.106	.015	.058	(155,197)
B. Non-Linear Interaction of E2 by CES-D1	8.31 (1.37)	0.02 (0.25)	−3.43 (1.85)	0.81* (0.34)	0.01 (0.01)	−0.03* (0.01)	.106	.014	.064	" "
C. Separate Non-Linear Equations for E2 and C (C)	8.31 (1.44)	0.02 (0.27)			0.01* (0.01)		.075	.009	.221	(155,197)
(E2)	4.88 (1.19)	0.83 (0.22)			−0.02* (0.01)		.137	.020	.037	(155,197)
D. Separate Linear Equation for C (C)	7.35 (1.22)	0.33* (0.09)					.072	.111	.001	(155,197)

*Tested Variables

Figure 1. Fitted Outcome by Baseline CES-D: Controls vs. Merienda (E2)



16 or higher. Baseline low end Experimental versus Control differences, therefore, will be more interpretable than the high which are based on relatively fewer observations. If low baseline CES-D differences are thought of as evidence for prevention effects, the high end could be construed as "treatment" effect. Recalling that the study sample was specifically designed as an early preventive intervention (i.e., to produce smaller increases in CES-D among experimentals), it becomes apparent that our sample is not well suited to addressing possible treatment effects because of the relatively small proportion of women experiencing elevated symptom levels at baseline. The fact that any appear in the high range is the result of using a binary caseness criterion from the Diagnostic Interview Schedule rather than CES-D at the second stage of screening. Given that 16.0+ is often used as the presumed caseness score on CES-D,

we see that 25% of women who passed the DIS screen would be CES-D cases.

Quasi-Experimental Design Outcomes

Analyses within three ranges of baseline CES-D are presented in Tables 4 and 5. To enhance comparability of experimentals and controls in these analyses, the baseline level of a large number of potential covariates was introduced into each test regression analysis. The covariates include employment status (EMPL 0 = not employed, 1 = employed), age in years, number of health related events during previous six months (NHLTHEV), number of weekly contacts with friends or family of origin (CONTACT/WK), self-reported health status (HEALTH 1 = EXCELLENT to 4 = POOR), self-esteem (low = 6 to high = 20), mastery (low = 8 to high = 24), self-denigration (low = 5 to high = 20), years of U.S. residence and acculturation (low = 5 and high = 30). Given the intercorrelations among these variables, typically no more than one or two emerged as a statistically significant covariate. Only statistically significant covariates are included and reported in our presentation.

The baseline CES-D controlled analyses for the El modality are shown in Table 4. The first regression for the El comparison controls (Equation Ia) is limited to those 53% of women whose baseline CES-D was in the 0-6 range. The partial slope associated with modality on Line A.1 is -3.20 with a test probability 0.026. This indicates significantly lower outcome CES-D mean scores for El women than for Control women. Recalling that this analysis is for all E1 and Control women within the 0-6 baseline CES-D range, we see that the experimental effect seems strong enough for participants to "carry" non-participants. In the second baseline CES-D grouping of 7-15 we obtain a non-significant positive slope of 3.00 (Equation IIa), while in the third (IIIa) 16+ grouping it is also non-significant but negative.

The last and least stringent analyses incorporate level of participation in the intervention, as well as restriction to the three baseline CES-D groupings, and are presented in the lower portion of Table 4. The three levels of participation are coded as dummy variables with controls serving as the reference category. The outcome which would most clearly point to a salutary intervention effect would be a significant difference for full participants and no difference for non-participants and, perhaps, dropouts. In Equation Ib for the 0-6 baseline CES-D range, negative slopes obtain for each El participation dummy variable. The first is clearly significant ($p = 0.040$), the

Table 4. Multiple Regression Tests for Intervention Effects on Outcome CES-D by Three Baseline CES-D Groupings (A) Without and (B) With Participation Level Consideration

		Linkperson (E1) Modality		
	Equation Baseline CES-D N (Control, EXP)	Ia* CES-D1 (0–6) (79,83)	IIa CES-D1 (7–15) (36,35)	IIIa CES-D1 (16+) (40,37)
A.1	Control = 0, E1 = 1	−3.20 (1.42) (.026)	3.00 (2.60) –	−1.79 (2.48) –
A.2	Intercept	6.70 (1.24) (.000)	−0.98 (4.28) –	−9.77 (5.52) (.081)
A.3	Covariates ($p \leq .05$)	1.14 CES-D1 (0.38) (.004)	1.08 Slfdenig (0.41) (.011)	0.75 Slfdenig (0.34) (.031) 6.39 Health (1.89) (.002)
A.4	R^2 (Adjusted)	.065	.071	.205
	Equation	Ib	IIb	IIIb
	Participation Level			
B.1	.50–1.0 (full = 1)	−3.39 (1.63) (.040)	5.24 (3.31) (.119)	−3.52 (2.78) –
	.08–.49 (Drop-Out = 1)	−4.21 (2.41) (.083)	−1.90 (4.95) –	−3.73 (4.72) –
	0 (None = 1)	−1.51 (2.48) –	2.28 (3.84) –	5.38 (4.44) –
B.2	Intercept	6.72 (1.25) (.000)	−1.16 (4.35) –	−8.46 (5.50) (.129)
B.3	Covariates ($p \leq .05$)	1.13 CES-D1 (0.38) (.004)	1.10 Slfdenig (0.42) (.012)	0.83 Slfdenig (0.34) (.017) 5.60 Health (1.19) (.005)
B.4	R^2 (Adjusted)	.058	.069	.223

*Presentation Format:
−3.20 = Unstandardized Partial Slope Coefficient
(1.42) = Standard Error of Slope
(.026) = Test ß = 0 Probability (Reported for $p \leq .20$)

second is marginal ($p = 0.083$), and the third non-significant. These outcomes are quite consistent with a positive intervention effect for this 0-6 asymptomatic/low symptom CES-D subgroup. As before, no significant differences emerge for the 7-15 or 16+ subgroups. The fairly large positive slope for full participants in the 7-15 subgroup (Equation IIb, Line B.1) suggests a possible negative effect of participation among these subjects.

The same analytic strategy was employed for tests of the E2 modality (refer to Table 5) in which significant non-linear modality on baseline CES-D interaction was observed. By performing our analyses within the three baseline CES-D ranges, we eliminate both the non-linearity and interaction, thus providing the basis for at least a partial test of intervention effects. For the 0-6 baseline CES-D subgroup, the modality effect slope is -2.15 with a probability of 0.104, a noteworthy but not clearly statistically significant difference. In Equation IIa and IIIa for the higher CES-D subgroups, the modality slopes are both positive; but it should be noted, quite small relative to their standard errors. Participation level was taken into account in the next set of regressions. In Equation Ib the full participation slope is -3.52 with a fairly strong probability of 0.069. The dropout and zero participant slopes are clearly non-significant. Equations IIb and IIIb again point to no significant intervention effects for women in the 7-15 and 16+ baseline CES-D subgroups.

Summary of Intervention Effects

Seventy-eight percent (78%) of the initially randomized subjects were successfully reinterviewed for the outcome measure approximately one year later. Of the remaining 22%, approximately two-thirds had moved from the study area and one-third refused the outcome interview. No significant mortality differences were found among the three modalities and no significant predictors of reinterview were found. Experimental mortality, therefore, did not appear to be a source of potential bias.

Levels of participation in the intervention were somewhat lower than expected. In the Linkperson (EI) modality, 31% did not participate at all, while in the Merienda (E2) modality, this proportion was higher at 52%. It should be reiterated that the E2 modality required women to leave home to attend group sessions, thus, at least in part, explaining the lower participation rate. The dropout rate (one or more but less than half of scheduled sessions) was the same for El and E2 at 18%. Full participation rates (one-half or more of

Table 5. Multiple Regression Tests for Intervention Effects on Outcome CES-D by Three Baseline CES-D Groupings (A) Without and (B) With Participation Level Consideration

		Merienda (E2) Modality		
	Equation	Ia*	IIa	IIIa
	Baseline CES-D	CES-D1 (0–6)	CES-D1 (7–15)	CES-D1 (16+)
	N (Control, EXP)	(79,109)	(36,40)	(40,48)
A.1	Control = 0, E2 = 1	−2.15 (1.32) (.104)	1.56 (2.32) –	1.31 (2.48) –
A.2	Intercept	19.58 (5.56) (.001)	10.21 (2.20) (.000)	24.79 (12.48) (.050)
A.3	Covariates ($p \leq .05$)	0.91 CES-D1 (0.34) (.008)	2.49 Nhlthev. (1.19) (.039)	6.02 Health (1.83) (.050)
		−3.09 Empl (1.39) (.028)	−0.20 Contact/wk (0.90) (.032)	−1.46 S.esteem (0.58) (.014)
		−0.27 Age (0.13) (0.33)		
A.4	R^2 (Adjusted)	.082	.084	.175
	Equation	Ib	IIb	IIIb
	Participation Level			
B.1	.50–1.0 (Full)	−3.52 (1.92) (.069)	0.20 (3.04) –	−2.08 (3.02) –
	.08–.49 (Drop-Out)	−1.79 (1.98) –	2.42 (3.69) –	6.15 (6.08) –
	0 (None)	−1.55 (1.60) –	2.48 (2.99) –	3.89 (3.12) –
B.2	Intercept	20.48 (5.66) (.001)	10.29 (2.23) (.000)	23.68 (12.92) (.071)
B.3	Covariates	0.93 CES-D1 (0.34) (.007)	2.39 Nhlthev. (1.21) (.050)	6.21 Health (1.91) (.002)
		−3.05 Empl (1.42) (.033)	−0.20 Contact/wk (0.09) (.036)	−1.42 S.esteem (0.58) (.017)
		−0.30 Age (0.13) (.024)		
B.4	R^2 (Adjusted)	.077	.065	.193

*Presentation Format:
−2.15 = Unstandardized Partial Slope Coefficient
(1.32) = Standard Error of Slope
(.104) = Test ß = 0 Probability (Reported for $p \leq .20$)

scheduled sessions) were 51% for El and 30% for E2. Extensive analyses of participation revealed no profile for El and suggested that E2 participants were younger, less acculturated, and more likely to be recent immigrants. Analyses did reveal that participants tended to be higher on baseline CES-D mean scores. Dropouts in the E2 modality were low on baseline CES-D, while full participants quite high. The association between participation and CES-D presented analytic complexities in the form of non-linearities and baseline by modality interactions.

The analytic strategy employed was to proceed from a most conservative posture, which did not account for participation, to quasi-experimental treatments. Under this conservative approach, we found a fairly weak, not quite significant positive intervention effect for the El modality. The effect on participants here was almost strong enough to "carry" non-participants and dropouts. The outcomes for E2 turned out to be quite complex in that a non-linear modality by baseline interaction was observed. Examination of the data suggested a positive intervention effect at both extremes of baseline CES-D mean score distribution.

As suggested by the most conservative analyses, analyses were performed for subgroups based upon baseline CES-D. For the lower half in the 0-6 baseline range, the El intervention was found to be clearly significant and thus pointing to a salutary prevention effect for asymptomatic and low symptomatic subjects. This effect was obtained without taking participation into account. No significant modality effects were observed in the two top baseline CES-D quartiles (7-15 and 16+); a similar but somewhat weaker outcome obtained in the Merienda (E2) modality.

In the least restrictive analyses in which both baseline CES-D and level of participation were taken into account, it was observed that full participation was, in fact, associated with a prevention effect for asymptomatic and low symptom (0-6) women. These low symptom and asymptomatic women actually constituted the majority of subjects in the study because of the two-stage screening process before randomization. No significant effects in either modality were observed for higher baseline CES-D subgroups.

Discussion and Implications

Projecto Bienestar seems to have succeeded in accomplishing its primary goal; e.g., preventing onset of depressive symptoms among those women who were asymptomatic or minimally symptomatic at

baseline. These effects held for both Linkperson (E1) and Merienda (E2) intervention modalities. However, the interventions were not effective in lowering symptoms levels among women who were already experiencing moderate symptom levels at baseline. This indicates that the intervention is probably too weak to have significant treatment effects, nor was the curriculum designed for remediation of persistent depression. Our interpretation is that women who were asymptomatic (or nearly so) at baseline already have coping resources which are fairly effective, and the Projecto Bienestar intervention process refined and supplemented these. The women who benefitted from the intervention were already somewhat resilient, and the intervention worked to extend (or perhaps make more explicit) their sense of personal efficacy for dealing with problems in daily living. In some instances, the intervention probably supplied emotional support, as well, which may have been in short supply in their lives.

Therefore, Projecto Bienestar may not be a good general purpose intervention although it seems to benefit a certain subset of women who are appropriate for early preventive interventions. Frankly, the Projecto Bienestar 12-week intervention period is not long enough for dealing with the much more complex problem of arresting or reducing symptoms levels among individuals with chronic depression. Furthermore, it would be difficult to design a low-power intervention that could meet the needs of asymptomatic as well as highly symptomatic women simultaneously. A paradox of this intervention is that depressed women, who were the most eager to participate in Projecto Bienestar interventions, were also least likely to be benefitted by it.

It should be kept in mind when reviewing the results of this experimental community trial that there is a big difference between a scientific study of this sort and the implementation of prevention programs in the community that do not require such stringent evaluation criteria. Obviously, this was a very difficult study to conduct and most of the logistical problems were directly linked to maintaining a strict experimental design. For example, our method of subject recruitment was intended to produce a sample that maximized the generalizability (external validity) of the results. However, there are certainly much easier ways to conduct this process within the context of community natural networks or via community agency outreach programs. Community interventions such as Projecto Bienestar need to be tailored to the naturally occurring cultural prac-

tices and life styles of Hispanics. This presupposes that intervenors (1) possess sufficient knowledge of local cultural customs and conditions, (2) have the ability to enter the community and access micro networks, (3) enjoy the programmatic flexibility to shape interventions according to the flow of daily live activity in these communities, and (4) sustain these interventions over time.

The best method for learning how best to conduct interventions in the Hispanic community is through the actual experience of doing them, and it is unfortunate that requisite resources are not made available for general experimentation or replication of studies such as Projecto Bienestar from local funding sources. Even more distressing is the lack of linkage between research and development at the NIMH, which supported Projecto Bienestar, and the community mental health systems at the state level. Simply put, there is no policy or administrative mechanism available to motivate individual states to undertake systematic interventions of this sort once they have been developed and evaluated. In the absence of this linkage, experiments such as Projecto Bienestar will remain isolated experiences. The inhospitable climate in the arena of mental health prevention stands in stark contradiction to the emphasis on wellness and health promotion that has gained prominence nationally (Kleinman, 1988). Indeed, without a comprehensive prevention strategy, there is little that we can begin to address the spectrum of mental health needs found in Hispanic communities.

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13

Psychiatric Treatment of Mexican Americans: A Review

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Introduction

There have been two notable attempts to delineate treatment research needs for Hispanics by Rogler et al. (1989) and Padilla and Lindholm (1984). Padilla, in his usual cogent fashion, reduced the problem to the basic issue of how to provide required mental health services to a growing U.S. Hispanic population and how to do so in Spanish (Padilla, 1984). There is no recent work, to my knowledge, refuting the earlier report about the significant paucity of Hispanic mental health professionals (Olmedo, 1977). Since that publication, the high rate of migration of Hispanics to the U.S. has not diminished, and the rate of production of Hispanic mental health professionals certainly has not accelerated.

Rogler et al. (1989) describe the research challenge as one designed to further our understanding of what has commonly been called culturally sensitive treatment modalities, particularly psychotherapeutic ones. The authors pose two more specific questions: (1) Should these culturally sensitive treatment modalities have an "isomorphic" or mirror-like relationship to the client's culture? or (2) Should culturally sensitive therapy depart from this isomorphic status and instead serve to bridge a gap between the client's native culture and the majority culture?

Rogler et al. go on to point out that there is a very limited amount of research addressing these questions. In fact, as the best example of a research study in this area, Rogler et al. summarize Constantino's work using *cuento* or folk tale therapy with Puerto Rican children. It was found that children who received the adapted (or bridging) folk tale therapy had less trait anxiety than children in both the traditional group and the non-adapted folk tale therapy group. The implication of this study is that culturally sensitive therapy, that is directed at helping a member of an ethnic minority adapt or bridge to the dominant culture, may be more useful than more "traditional" culturally sensitive therapy, at least in reducing anxiety. It

is not clear, however, whether or not the source of this anxiety was cultural dissonance experienced by the children growing up in New York, or the result of a multitude of other factors which might also produce anxiety including biological ones. Finally, the relevance of this interesting study of children to adult disorders is not at all clear. It is certainly true, as Rogler et al. (1989) point out, that anxiety is one of the more common presenting complaints in community mental health clinics. In this clinical context, however, anxiety is a very non-specific symptom, and its relationship to earlier childhood anxiety is also not clear.

Individual Psychotherapy

The review by Rogler et al. (1989) briefly discusses the work of other investigators and clinicians who have attempted to address the question of culturally sensitive individual psychotherapy. Central to the discussion by Rogler et al. (1989) is the long-standing issue about whether poor people can benefit from psychotherapy. This point should be discussed further.

Historically, the discussion has centered around the notion that the poor have too many real life hassles to have the patience, time, and interest for "insight" psychotherapy. Emotional or mental disorders are considered to be caused by social conditions associated with poverty, and the poor are seen as victims. This one dimensional view of the poor as victims of their environment appears to demean the poor by suggesting that they do not have rich (albeit perhaps traumatic) developmental and interpersonal experiences. It is concluded that their therapy should merely provide them, if at all possible, with social assistance, emotional support, etc. Furthermore, psychotherapy is equated with psychoanalysis and thus dismissed as irrelevant. There are several problems with this argument. Not all Hispanics are hassled or poor. If they are poor, this certainly does not mean that they are free of interpersonal or developmental problems for which they want professional help. Many workers have noted this and recommended specific approaches within a dynamically oriented psychotherapeutic approach (Bluestone & Vela, 1982; de Monteflores, 1986; Acosta et al., 1982).

Nonetheless, the review by Rogler et al. (1989) of the culturally specific modifications in psychotherapy is a valuable one. It discusses a number of different techniques in the isomorphic category that, in different ways acknowledge, accommodate, and mirror cultural aspects (Gomez, 1983; Pitta, 1978; Maldonado-Sierra & Trent, 1960;

Szapocznik & Fernandez, 1978). Techniques that depart from this isomorphic approach are also mentioned, most notably Szapocznik's later work (Szapocznik & Fernandez, 1980) with Cuban families and individuals and Boulette's (1976) assertiveness training approach. These techniques identify and, in some cases, reinforce cultural facets. In addition, they also proceed beyond this to identify maladaptive, perhaps culturally determined processes, such as lack of assertiveness in women and enmeshment in families. Some of the therapy is subsequently directed at attempting to modify these maladaptive, culturally determined elements.

The Constantino study discussed previously by Rogler et al. (1989) involving cuento therapy for children is apparently the only study extant comparing the therapeutic efficacy of an isomorphic versus a non-isomorphic approach. The shortcomings and relevance of the study have already been discussed. In addition, the program was a group-mediated one involving the participation of children and mothers for 20 weekly, 90-minute therapy sessions. The complexity of the study, it seems, makes it difficult to determine with assurance what factors actually produced the change in anxiety.

Only a few reductionists would argue that individual psychotherapy is of no benefit to Hispanics. Also, it appears that in some cases culturally sensitive modifications can be made that enhance, enrich or expand the effect of whatever therapy is being employed. It is still open to question whether these culturally sensitive modifications of individual therapy techniques should be isomorphic or bridging as defined by Rogler et al. (1989). This also depends upon whether one accepts Rogler's model as valid.

Furthermore, the admonition by Sue and Zane (1987) with respect to the application of culturally sensitive techniques must be kept in mind. The authors assert that a culturally sensitive technique (just like any other technique in psychotherapy) can be misplaced, misdirected or inappropriate. Finally, the work of Szapocznik and Fernandez (1978, 1980) has taught us that Hispanic cultural traits may be maladaptive, as well as adaptive, in the United States and that the mature clinician should acknowledge this and implement the appropriate technique to attempt to change such processes.

Assuming that individual psychotherapy is considered a valid modality for Hispanics, are there reasons to believe that one approach might be more beneficial than another? For example, it could be considered that a behavioral approach that focuses on the solution of here and now problems might be more appropriate than an insight

oriented one that focuses on developmental issues. Also, an interpersonal approach may be considered in Hispanics because of the importance of family and interpersonal relations (*personalismo*). Comparative efficacy studies of psychotherapy techniques in Hispanics have not been done, although the individual modalities, particularly behavioral and cognitive approaches, have been shown to have efficacy in Hispanics (Comaz-Diaz, 1981). Further research may not be productive in attempting to determine which specific techniques in psychotherapy are more effective among Hispanics. Psychotherapy research is laden with difficulties. In actual practice, it is doubtful that sensible clinicians can maintain such purity of approaches. Rather, what undoubtedly occurs is that techniques are used depending on training, clinical situation and other factors. Finally, as Lopez and Hernandez (1987) have shown, competent clinicians (at least as judged by the ones he studied) already appear to modify their evaluative and therapeutic expectations and approaches when encountering Hispanic patients.

Group Psychotherapy

The usefulness of group psychotherapy with Hispanics has been recognized for a long time (Delgado, 1983; Hynes & Werbin, 1977; Kraidman, 1980; Normand et al., 1974; Olarte & Masnik, 1985). Almost all authors, that have reported successful experiences with this modality, also described a variety of adaptations that they have had to make, in order to enhance acceptance and effectiveness. These have included flexibility in scheduling, attention to cultural factors, permission to discuss practical problems, flexible use of Spanish, careful orientation about group therapy and others. This strong testimony to the efficacy of group psychotherapy with Hispanics has emerged from clinical work involving primarily lower socioeconomic class patients. There are no comparative descriptive reports which include more acculturated or middle class Hispanics. It would be of interest to examine what adaptations, if any, need to be made with this group and how culturally determined themes are manifest and handled.

There is no evidence to suggest that there is any particular type of group therapy technique (i.e., cognitive, behavioral, dynamic) that is superior in working with Hispanics. Most reports have emphasized the surprising utility and ease of acceptance of group therapy by Hispanics and the modifications mentioned above. Comas-Diaz

(1981) did conduct a study of depressed Puerto Rican women assessing the efficacy of behavioral versus cognitive oriented group psychotherapy and found no differences.

Comas-Diaz (1981) examined whether or not in group therapy with Hispanic women certain cultural values were expressed as a function of different therapeutic approaches. Two approaches, behavioral and cognitive, were employed in group therapy with depressed Puerto Rican women recently migrated from Puerto Rico. Although the primary question about the relationship between cultural values and therapeutic approaches was not fully elucidated, it was found that in both groups certain themes tended to be discussed that appeared to be a reflection of specific underlying cultural values. These more sustained themes involved children, spouses (or lover), and interpersonal relationships and, according to the author, they appeared to reflect underlying cultural values such as *marianismo* and *personalismo*. Discussions reflecting *marianismo* involved the culturally determined role of the woman as "martyr" and "long suffering" character (like Mary). This observation by Comas-Diaz (1981) about expected gender role behavior among Hispanics has been made repeatedly by others and serves to remind us that, at least in clinical populations, this is an important consideration and common finding.

Interesting to note were findings that somatic concerns were hardly mentioned, and sex was not discussed at all in this study of content in group therapy by Comas-Diaz (1981). The almost total lack of discussion of somatic symptoms can probably be reconciled with epidemiologic findings of high rates of somatization among Hispanics (Escobar, 1987) by suggesting that this population may be more likely than other groups to present with somatization symptoms if examined cross sectionally; however, once an ongoing talk therapy mode is established, somatization may not be as significant an issue. It is also possible that since the group therapist in this study was a clinical psychologist and not a physician, somatic concerns were less likely to be expressed because the clients understood their therapist's limitations in this area.

Finally, the total lack of discussion about sex (presumably even in passing) is worth noting. As Comas-Diaz (1981) points out, the Puerto Rican culture has a taboo about discussion of sex in public; and, since the group process was short term, insufficient time may have elapsed for the development of *confianza* (trust). Nevertheless,

this observation concerning a reluctance by female clients to discuss sexual matters in a group, even with a female therapist, requires further attention in the behavioral science literature on Hispanics. There is a paucity of research or even clinical reports about sexual attitudes and practices among Hispanic men and women, who are heterosexual or gay. This shortcoming, in this age of AIDS and other sexually transmitted diseases, is especially concerning.

Family Therapy

The richest Hispanic contribution to the state of knowledge in mental health has been made by Hispanic family therapists beginning with Minuchin et al. (1967) and including Szapocznik et al. (1989) and the excellent efforts of others (Bernal & Flores-Ortiz, 1983; and Baptiste, 1987). It is worthwhile to note, that, this statement about the relative contribution of family therapists is true only if we exclude the work of other U.S. Hispanics, such as Otto Kernberg, whose enormous contributions have not been specifically focused on Hispanic populations. Building largely on Minuchin's structural approaches, these and other family therapists have described their work with Hispanic families focusing on the issues and the themes encountered and on the technical modifications required. Some authors have discussed outcome; however, most of the reports have been theoretical and descriptive.

Szapocznik et al. (1983; 1988; 1989) have been the most productive in conducting and reporting Hispanic family therapy research with Cubans in the United States. They have examined engagement strategies (Szapocznik et al., 1983), conjoint versus one-person family therapy (Szapocznik et al., 1988) and the efficacy of structural versus psychodynamic child therapy in boys (Szapocznik & Kurtines, 1989). The structural approach to family therapy with Hispanics has had particular appeal because of the apparent match between this modality and the value orientation and interpersonal style preference of Hispanics. This assumption is partially supported by Szapocznik's finding that structural family therapy, compared to psychodynamic child therapy, was found to be more effective in protecting the integrity of the family at one year follow-up. It was also concluded, however, that family structural change alone was not the mechanism mediating symptom reduction in their individual subjects, given that both the structural and the psychodynamic approaches resulted in psychodynamic shifts.

There has been relatively little reported on psychoeducational ap-

proaches with Hispanic families of seriously mentally ill individuals. This area warrants further exploration since it has been reported that, at least among Mexican Americans, there are significant differences in family attitudes toward a schizophrenic member (Jenkins et al., 1986). The manner in which these attitudes translate into behavior and family function has not been sufficiently explored.

This area of family and Hispanics is such an extensive and potentially rewarding one that it cannot be done justice in this type of overview. For this reason, I would recommend that this area be pursued further in the form of a review by someone from the field; a commissioned workshop and a monograph are some other similar mechanisms.

Pharmacotherapy

There is a very limited amount of research on pharmacotherapy and Hispanics, including the psychosocial aspects of medication usage. The latter gap is particularly distressing for several reasons. Somatization is generally believed to be more common among Hispanics, and, if this is so, it would follow that Hispanics also are more interested in somatic cures, i.e., medication. Studies of the perception of mental illness (Karno & Edgerton, 1969) support the view that some conditions are perceived by Hispanics as more medical and hence biologic. Thus, if there is indeed a tendency for Hispanics to prefer somatic cures, it is troubling that more in-depth studies have not been conducted about Hispanic attitudes toward medication, compliance patterns, side effect profiles, placebo effects, and similar qualities. It seems that this could be a fertile area for at least some preliminary descriptive studies.

The principal impression reported is the possibility of a greater sensitivity of Hispanics to psychotropic drugs, in terms of clinical response and side effects (Marcos & Cancro, 1982). A study of Colombians also supported this impression (Escobar & Tuason, 1980). Another study, however, comparing the pharmacokinetics of nortriptyline in normal Hispanics (Mexicans in the U.S.) and Anglos found no significant differences in the two groups (Gaviria & Javaid, 1986). The latter report concluded that, if the clinical observation of differences in sensitivity are real, then, at least for this drug, the difference may be due to receptor sensitivity. This possible receptor sensitivity difference may also be worth further investigation.

There are no reports, even impressionistic ones, of the clinical

effects of antipsychotics, anxiolytics or the newer (serotonergic) antidepressants in Hispanics. In this regard, a review of the Latin-American psychiatric and psychopharmacologic literature would be informative since this literature may at least contain some anecdotal or clinical reports about the drugs.

Folk Systems

Folk systems will not be reviewed here except to point out that it is well recognized that each of the three major Hispanic subgroups in the U.S. has its own distinct folk/religious treatment system. These systems have been investigated descriptively and ethnographically. It is a matter of debate whether further research should be conducted on these systems, their practitioners and techniques, since almost by definitions their theoretical base and techniques lie outside the realm of "scientific" investigation. Nevertheless, it is also generally accepted, with some modest dissent, that these approaches are an important source of treatment for many Hispanics, and any discussion of the mental health treatment of Hispanics should not omit them.

The explorations by Jenkins (1988) and Guarnaccia et al. (1990) are especially illuminating. The latter study, in particular, defines the issues and concerns having to do with the role of cultural response styles and of culturally meaningful expressions of distress. Cuellar and Roberts (1984) have previously discussed this issue of response style but with different conclusions.

Program Adaptation

Ethnic group specific treatment programs have been developed in many regions of the country and have included several that focused specifically on Hispanics. Some have involved the adaptation or reorganization of an entire outpatient clinic (Heiman et al., 1975); others more commonly have consisted of separate ethnic-specific units in institutions (Dolgin et al., 1987; Lopez et al., 1990). Some of the latter, such as the Hispanic program at Saint Elizabeth's Hospital in Washington, D.C., have provided a day time psychiatric program for Hispanic patients involving Spanish-speaking personnel and culturally attuned activities and treatment modalities. Others have involved entire 24-hour care programs. Interestingly, there are no studies examining the relative effectiveness of these programs compared to traditional, culturally neutral ones. Such studies may

be important, particularly those focusing on short term treatment units or day hospitals, to capitalize on the trend toward briefer hospital stay and increasing use of day hospitals.

Conclusions and Recommendations

There are several areas of investigation and further activity that could result in productive gains. First of all, family therapy, the richest area of Hispanic contribution to the field, should be encouraged. This could be done modestly by sponsoring regional conferences, workshops, and similar activities, perhaps in conjunction with the appropriate subunits of the major professional associations. It does appear that in a multicultural nation with increasing immigration, the contributions of Hispanic family therapists are a commodity worth nourishing. It would also be important to explore what therapeutic work has been attempted with the families of seriously mentally ill, particularly schizophrenic Hispanics. Only a few preliminary reports, most notably Jenkins et al. (1986) are available on this topic.

Specific studies of the relative efficacy among Hispanics of the more recent innovative therapies may also be important. For example, it would be of interest to examine the efficacy of cognitive therapy versus other psychotherapy in seriously depressed Hispanics. The greater emphasis by NIMH on serious mental illness should be recognized, and, as much as is reasonable, Hispanic research efforts should probe for gaps in this knowledge. Additional studies focusing on the pharmacological aspects of antipsychotics in Hispanics have been mentioned as important.

The deafening silence on sexuality in Hispanic therapy literature merits further exploration as discussed earlier. Strategies to enhance our understanding of this major area of human life in Hispanics, and other minority groups, should be developed. Several types of modest, yet useful research initiatives in sexuality, can be envisaged, such as: (1) sexuality studies of specific subgroups, i.e., women, gay men, adolescents; (2) studies, conferences and other activities focusing on Hispanic professionals, in order to understand and deal with their own issues with sexuality. (It might be assumed that Hispanic professionals may also have culturally determined attitudes regarding sexuality that affect how they deal with it in their professional work); and (3) risk behavior change studies utilizing culturally sensitive intervention.

Finally, we should be mindful of Fabrega's (1990) distinction between establishment Anglo-psychiatry and its approaches and those which are applicable to Hispanics and other ethnic groups. Fabrega cautions that what we diagnose and treat using the establishment diagnostic (*DSM III-R*) and treatment systems may not necessarily apply to the various Hispanic subgroups or other ethnic groups in the United States. Basic diagnostic definitions derived from the Anglo population of the U.S. may not fit with the reality of other groups. The same can perhaps be said about therapeutic definitions, concepts and their applicability. The folk conceptualization of mental illness and its treatment among U.S. ethnic groups may shed some light on this dilemma.

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Appendix

Commentary on Management of Public Sector Mental Health Services for Latinos

Mental Health Research in the Public Sector and Its Impact On Hispanic Clients

Floyd H. Martinez, Ph.D.

The country's public mental health systems are undergoing dramatic changes as a result of major shifts in public policy and consequent changes in funding strategy. At a most fundamental level, the philosophical underpinnings of community based mental health care are rapidly shifting from a belief in the right to treatment by all who need it to a pragmatic realization that only a select few can be served with the resources available. How this basic narrowing of the eligibility spectrum is achieved varies from state to state and from provider to provider, but the net effect is that vast *notch groups* are being created in the service of *managed care*. In order to begin to appreciate the need for, and impact of, community mental health research, an overview of this new mental health care environment is necessary. With some sense of how the public mental health script is being performed, we can hopefully be in a better position to examine the special case of Hispanic mental health research in the public sector.

Although several factors have played a role in the current transformation of community based care, the passage of PL. 99-660 (1986) has served to bring the basic realities uniformly to all fifty states. Simply stated, the law requires states to develop a systemwide plan which places two distinct clinical populations as exclusive priorities for the utilization of federal block grant funds: severely mentally ill adults (SMI) and seriously emotionally disturbed children (SED). In a sense, this requirement represents the *coup de grace* for local provider systems, which have been continually stressed by:

1. State systems which were seriously underfunded in the face of continually increasing demands for services;
2. Steeply escalating administrative costs, such as professional liability insurance, occupancy costs and accountability requirements;
3. Increasing competition by the private psychiatric sector, which is capable of chipping off the few profitable aspects of the array of services; and

4. Scarcity of human resources with adequate training and experience to meet the credentialing requirements of payors.

It is clear that much of the impetus for PL 99-660 came from the intensive criticism that community based programs, particularly community mental health centers (CMHC) originally created with National Institute of Mental Health (NIMH) support, were not serving the "chronically" mentally ill. Among the principal critics were the National Alliance for the Mentally Ill (NAMI) and its state affiliates around the country. It was claimed that CMHC's systematically chose to serve the "worried well" and sent the difficult cases to intensive settings such as the state hospital. To a substantial degree, the criticism was undeserved. While it is true that some centers actively resisted the severely mentally ill client, many more attempted to meet the needs of this difficult and expensive group with grossly inadequate fiscal resources and without a clear and coherent state or federal policy. We must keep in mind that in many states, centers operate under a *unit reimbursement* contract with the state mental health authority. Thus, the center produces what the state buys. Another significant impediment for the CMHC's was the lack of well trained professional staff to serve the client with major mental illness. This lack, at least partly attributable to the failure of graduate training programs in the mental health disciplines, is particularly acute with regard to professionals specifically trained to serve racial and ethnic minorities.

The new era of managed mental health care is characterized by rapid organizational structural change and major adjustments in operational philosophy. With ever growing numbers of ineligible client groups appearing at the doors of the providers and with payors severely limiting rates and service packages, CMHC's and other specialty programs have come to the obvious conclusion that they must adopt a far more entrepreneurial approach, or go out of business. The clear pathway is toward a management strategy that creates and seizes a range of opportunities to broaden the funding base and, at the same time, trims all fat from the organization. The time-honored mission statement cast during the community mental health center development era, which addressed the precept "services to all in need, regardless of ability to pay and without regard to race, color or creed", is being nostalgically placed in the archives of the Board of Directors.

In its place, the modern CMHC is developing a corporate culture and structure designed to utilize public funds with far greater cost-

efficiency and to seek new ventures in the alphabet soup of the broader health care arena. Thus, the CMHC, which was once proud of its comprehensive continuum of treatment *and* prevention, is giving way to a new cluster of non-profit and profit corporations designed to be "leaner and meaner and faster." This new mental health care environment is producing a long list of important questions. For example, what happens to quality of care in service systems designed for cost containment? What level of training (and cost) is necessary to deliver a unit of service? To what degree is it possible to substitute academic credentials with focused on the job training? Are all the traditional academic disciplines necessary in this new mental health care environment? Is traditional, insight-oriented psychotherapy effective with severely mentally ill clients; and, can such therapeutic efforts continue to be meaningful in highly limited treatment plans? Are there well documented treatment modalities which consider the special needs of minority groups and are they cost-effective?

It is at this point that we turn to the mental health research literature for answers. What do we find? It is generally known that mental health services research has generally lagged behind the existing conditions in the applied community environment. This is mostly due to the fact that the "cutting edge" of community mental health has been largely determined by fiscal limitations, legislative/political considerations and judicial decision making, all of which directly impact how local governments manage service programs. These processes do not systematically consult the mental health research literature. If they did, they would be disappointed because academically based researchers have been most interested in epidemiologic data, limited clinical outcome and program evaluation. A notable exception is the psychopharmacologic arena.

With regard to research on minority group issues, activity has been woefully meager in all areas. Those few studies which have been conducted have tended to focus on minority group elaborations of research questions about the general population. Even in the most recent policy setting and research planning efforts, the minority component is uninspired and largely out of touch with the fundamental direction the field is taking. In this regard, let us examine examples from the "national strategy" of the NIMH and the National Advisory Mental Health Council issued in 1991 in a report entitled "*Caring For People With Severe Mental Disorders: A National Plan of Research to Improve Services*". The plan outlines three

research strategies in dealing with rehabilitation in the section on "Minority and Cross-Cultural Issues" (p. 24):

1. "Investigators should attempt to discover whether being a member of a minority group makes a difference either in the effectiveness of rehabilitation or in the extent of rehabilitation services received from the state."

2. "More studies are needed to identify how to make service programs culturally appropriate and sensitive. One question, for example, is whether minority group members are more likely to use and be comfortable with culturally specific mental health centers. These centers target a particular ethnic or racial population using staff from the community. Another important question is whether being of the same ethnic group as the therapist is particularly helpful to a minority client, or whether it is more important to have a therapist—of any ethnic group—who has been trained in multicultural competence and sensitivity. Research might also explore varying cultural perceptions of psychotic disturbance, cultural styles of help-seeking, and cultural appropriateness of services."

3. "Rehabilitation of severely mentally ill persons emphasizes the importance of fostering independence. Yet in many minority cultures, interdependence is highly valued. Researchers should study the therapeutic use of interdependence in minority cultures that value it. This may mean permitting family members to take an active part in a client's rehabilitation. Not only does this spread the burden over a larger network, it is also consistent with the role of families in many cultures throughout the world."

While these strategies might be of some long-term, academic interest, they are substantially out of touch with the day-to-day needs of psychosocial rehabilitation programs for severely mentally ill adults from minority cultures. In the brief critique of the research strategies listed above, we must keep the following applicable features of managed care systems in mind:

1. Managed care is a service philosophy based on a prevention model; e.g., the service plan is aimed at wellness promotion and early intervention to reduce the cost of advanced conditions.

2. The focus of managed care is on cost containment with some "negotiated" standard of care.

3. Managed care systems depend on open market competition as a means of fostering low rates.

4. Managed care is payor driven. That is, the health plan or the

state mental health authority ultimately dictates what services are provided and at what price.

Research efforts with minority groups are often misleading, because some assume a level of homogeneity in the subject population and in the programs. For example, Hispanic clients vary widely in acculturation and subcultural background. In addition, considerable variability is introduced by the often fluid clinical picture where clients vary in acuity through time and across diagnostic groups, giving rise to many interactions which are very difficult to control.

With regard to the cultural appropriateness of programs and the comparative "use" of programs by mentally ill Hispanic clients, the availability of staff skilled in the language of the client remains as the single most practical aspect of cultural appropriateness. In the public sector, clients essentially have no choice as to what programs they use or how many units of service they receive.

Involvement of the family is usually acceptable and often encouraged in the rehabilitation process of severely mentally ill clients. The goal of rehabilitation is to foster independence, but interdependence between and among significant others is not necessarily incompatible with program goals. In reality, however, program experience shows that up to approximately one-third of severely mentally ill clients have no family to involve, or the family has deserted them in the turmoil of the mental illness.

Perhaps a more useful research agenda for the public sector would be to focus on program and administrative issues that often make the real difference for minority group clients. For example, there is a need to examine the various attributes of the human resources in relation to clinical outcome. There is also a need to develop models for training, assessment and compensation of bilingual skills and to demonstrate the cost-benefit to payors. Similarly, it would be highly useful to compare systems of care that systematically construct staffing patterns and arrange facilities of cultural competence and programs that do not. Clinical and cost data that showed positive systemic differences in favor of the first type of program, would make a powerful case for culturally competent systems and further development of services designed for cultural competence. Such a competitive edge could quickly have a significant effect on the marketplace.

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Systems Change in Public Mental Health

Sandy Padilla, M.S.

To create long-term systems change in one of the largest mental health systems in the world, with 31,000 employees; in the second largest State in the nation with a government of 150,000 employees; or in a State Senate controlled by Republicans and an Assembly controlled by Democrats—research is not enough. In these times of diminishing Federal and State funds, we need to be strategists, diplomats, experts, negotiators, teachers and politicians.

To assist policy makers in developing mental health models and programs, which are culturally relevant, effective and respectful of cross-cultural differences, we need valid research. This research can be integrated into a macro-systems approach for change. To be effective, there must be organizational change at every level of the public mental health system.

Overview

The public mental health system in New York State is large and complex. The New York State Office of Mental Health (OMH) provides direct mental health services through 31 State psychiatric centers with a culturally diverse workforce of approximately 31,000. This system is administered and regulated through five regional offices which monitor and license public mental health programs.

Culturally and ethnically diverse patient populations within this system have traditionally experienced unique needs regarding access to and relevant delivery of mental health services. The standard, culture-bound treatment approaches have inhibited successful service by creating cultural, linguistic and ethnic barriers to effective mental health care.

The large increase in minority populations in New York State, especially in the metropolitan area of New York City, poses a challenge to our current system. The 1980 census showed Hispanics represented 18% (1,464,634) of New York City's population; and the 1990 census indicates 24% (1,783,511) (Summary . . . Public

Law 94-171, 1991). Similarly, there is a large percentage of minorities in the Office of Mental Health (OMH) patient population. For example, minority patients constitute 73% of the forensic population and 31% of the adult patient population, and the numbers are continually increasing. Although the client population of the OMH consists of approximately fifty percent ethnic minority persons, the distribution of mental health professionals by ethnicity reflects a paucity of ethnic minority persons (Tables 1 and 2).

Systems Approach

The large, complex system often has gaps in services and programs to address Hispanic and other minority needs. OMH has invested in a system-wide approach to deal with the critical issues of increasing minority patient populations and the lack of administrative, professional and clinical staff knowledgeable of and sensitive to the sociocultural needs of this patient population.

Management and clinical staff are the important link between policy and implementation. They must have the multicultural knowledge and attitudes necessary to coordinate and integrate effective public mental health services throughout the system.

Changing the monoculture of an organization is a complex process and requires a systematic approach at all levels, including: policy/management, service delivery, and human resources levels. To accomplish this change, we need valid research that is not exclusively based on majority, middle class, white populations and investigated by middle class researchers. We need culturally and ethnically relevant and sensitive research, as well as psychiatric research instruments free of ethnocentrism. The interaction of valid minority mental health research and ongoing systems change at policy, administrative and clinical care levels will create the synergistic effect necessary for a monocultural paradigm shift to a multicultural paradigm.

Table 1. Ethnic Distributions of Mental Health Services Statewide (Adults, Children/Youth, Forensic)

Admissions	White	Black	Hispanic	Asian	Native American	Unknown
Inpatient	55.5%	29.9%	11.3%	1.3%	0.3%	1.6%
Outpatient	49.1%	30.4%	17.4%	0.8%	0.4%	1.9%

Table 2. Ethnicity of New York State Office of Mental Health Officers: Administrators and Officials (N = 533), and Professionals (N = 12,222)

September 1991 Admin./Officials**		Professionals***	
White	79%	White	74%
Black	10%	Black	12%
Hispanic	2%	Hispanic	3%
Asian	10%	Asian	11%
Native American	.02%	Native American	.03%

** Includes titles such as Commissioner, Executive Deputy Commissioner, Facility Directors, Director of Psychiatric Rehabilitation, Director of Staff Development & Training, Director of Institutional Human Resources, Director of Community Services, Director of Quality Assurance, Director of Facility Administration.

*** Includes titles such as Psychiatrists, Clinical Physician, Nurses, Occupational Therapists, Rehabilitation Counselors, Social Workers, Psychologists, Treatment Team Leaders.

Source:

Agency workforce analysis by federal occupational category. (1991). Albany: New York State Department of Civil Service, Division of Affirmative Careers.

Cultural Diversity Programs

The Office of Mental Health has begun this paradigm shift by developing cultural diversity programs. The New York State Office of Mental Health Cultural Awareness Programs include:

A. Minority Education, Research & Training Institute. This Institute was created to expand educational, training, research and recruitment opportunities for minorities in the mental health field and to improve the quality of care for minority patient populations. The Institute is developing clinical training models for use in all public mental health programs serving minorities.

B. Cultural Awareness Training. In 1988, the OMH initiated Cultural Awareness Training for the State psychiatric center clinical and direct care staff on Black and Hispanic issues related to patient care. Some areas covered in the training include: religion, health beliefs, dietary customs, language barriers, skin & hair care and the effects of medication on various racial groups. This training is being incorporated on a statewide basis.

C. Forensic Cultural Awareness Training Program. In 1988, the

OMH funded the first Forensic Cultural Awareness Training program for forensic staff. It was developed to meet the needs of an increasing Hispanic forensic population. The Hispanic forensic inpatient and outpatient (admissions) population is approximately 25% (2,038) of the current total forensic population.

D. Spanish Immersion Training for Forensic Staff. In 1988, the OMH funded the first Spanish language accelerated training program for forensic clinicians. This training program was established due to the lack of Spanish-speaking staff in the forensic units and in rural areas of the state. This training program helps meet the need for Spanish-speaking staff for the growing Hispanic forensic population.

E. Multicultural Advisory Committee (MAC). This Committee, which meets on a monthly basis, advises the Commissioner on policy, programs and activities regarding minority mental health matters. Its members make recommendations on solutions to meet the needs and concerns of minority patients in New York State. Their overall mission is to ensure equity in the service delivery system for the OMH's culturally and ethnically diverse patient population. The 16-Member Committee consists of representatives from across the state, and it includes leading Hispanics, Blacks, Asians and Native Americans who are authorities in the field of mental health. The MAC has established statewide regional Multicultural Advisory Committees to assist in carrying out their goals and objectives at the regional/psychiatric center levels.

The New York State Office of Mental Health offers a variety of bilingual and bicultural programs, including the following:the Bronx Psychiatric Center Bilingual/Bicultural Psychiatric Program; the Pilgrim Psychiatric Center Bilingual/Bicultural Ward; the Pilgrim Psychiatric Center, which provides a Day Program (La Casita) for both inpatients and outpatients; and the OMH's Intensive Case Management Program, designed to identify gaps and problems in the existing public mental health system.

One interesting example of a culturally competent intervention in these program is described here: " 'M', a young woman from El Salvador, was admitted to the hospital with serious psychiatric symptoms. As newly arrived immigrant to the U.S., 'M' had given birth just prior to admission as a psychiatric patient, and the child was placed in foster care. Morose and withdrawn, unresponsive and silent, 'M' was diagnosed as schizophrenic, treated accordingly, and placed in the inpatient Hispanic ward. 'M' was attended by members of the Bilingual/Bicultural Staff who spoke Spanish and could

communicate with her. Staff ascertained that, rather than schizophrenia, 'M' was suffering from depression brought about by witnessing the murder of close relatives by government authorities in El Salvador. Pregnancy and labor had triggered her painful reflections to produce postpartum depression. Staff were able to provide 'M' with the proper treatment because of their ability to communicate with her in Spanish and their understanding of the particular experiences a Salvadoran refugee might have experienced'' (Bilingual bicultural . . . center, 1991).

Intensive Case Management Program (I.C.M.).

This new initiative is unique because it gives Intensive Case Managers greater flexibility in case management and guarantees access to needed services for their clients. It has borrowed liberally from successful case management programs from around the country and has organized them as a single, flexible program to reach out to thousands of people who, in the past, have been unserved or underserved by the public mental health system. As a mental health system, a major goal of the Intensive Case Management program is the creation of an effective partnership between the Office of Mental Health, county mental health agencies, and local service providers. This desirable relationship is based on a strong commitment to meeting client needs (Public Report . . . Management, 1989).

The Bureau of Affirmative Action/Multicultural Affairs worked closely with the New York State Department of Civil Service to develop an effective Affirmative Action Plan to recruit minority Intensive Case Managers into our system. The OMH's I.C.M. Affirmative Action Plan was disseminated to all appropriate New York State psychiatric centers and offices throughout the system. The Plan included: (a) an affirmative action policy, (b) implementation procedures, and (c) a process for monitoring the Plan. The Bureau of Affirmative Action/Multicultural Affairs provided the necessary technical support to the psychiatric centers. An outstanding affirmative action effort was made possible by the united, consistent effort of all OMH Divisions. This plan has resulted in a high percentage of minority Intensive Case Management hires.

National Institute of Mental Health Grant

The Bureau of Affirmative Action/Multicultural Affairs was awarded a National Institute of Mental Health (NIMH) grant in late 1989 to develop and conduct a statewide Multicultural Awareness

Program for Policymakers. The grant established the Multicultural Project within the State Office of Mental Health's Bureau of Affirmative Action/Multicultural Affairs. The goal of the project is to enhance the capacity of the State Office of Mental Health to deliver culturally effective and efficient public mental health services to seriously, persistently mentally ill people in New York State.

The goals of the project are being accomplished by developing and initiating multicultural training programs at the policy level to create organizational/administrative change. These system changes enable the OMH to coordinate and integrate new multicultural public mental health service models necessary to meet the needs of a demographically changing client population.

The Multicultural Awareness Program for Policymakers (MAPP) is designed to provide New York State's public mental health policymakers with knowledge deemed necessary to ensure that mental health policies, procedures and service models are culturally appropriate and effective; to foster an increasingly comprehensive client-centered system and a culturally competent workforce of service providers and managers; and to encourage policymakers' integration of culturally relevant concepts in a manner that augments and enhances decision-making and improves the quality of the public mental health care system.

The project is under the direction of the Office of Mental Health's Bureau of Affirmative Action/Multicultural Affairs in collaboration with the Human Resource Management Unit and the Bureau of Survey and Evaluation Research. The project is consistent with the overall priorities of the Office of Mental Health, and it is a positive mechanism to institutionalize the multicultural approach to service delivery throughout the system at the policy, management and implementation levels.

Conclusion

As demonstrated in the OMH programs outlined above, our large bureaucratic system is in the process of a systems/organizational change. This system change can only be made successful by a combination of designated resources specifically for multicultural educational programs. In addition, success depends on establishing focused, long-term multicultural mental health service goals based on culturally and ethnically valid research. It is critical, that, as researchers and policy makers, we encourage and support cultural competency in mental health care systems. Only through a concerted effort can we provide culturally competent and effective public men-

tal health services for an increasing culturally and ethnically diverse client population.

This system change includes programs for recruiting minorities, such as the Cultural Awareness training programs, the Spanish Immersion program, Multicultural Advisory Committee, the Bilingual/Bicultural Mental Health programs, Intensive Case Management Program and the Multicultural Awareness Program for Policymakers. It is important to note that the programs are being implemented to enhance the capacity of the New York State Office of Mental Health to deliver culturally effective, public mental health services to seriously and persistently mentally ill people in New York State.

These benefits of this multi-dimensional approach are numerous. Culturally sensitive programs have emerged, and treatment orientations and modalities for diverse clients have improved. The approach should increase universal understanding of cultural values and linguistic considerations and recognition that ethnic and racial identity are key factors for improving employee productivity and mental health services.

As the approach is implemented, the public mental health system will improve as we become more aware of the ethnocultural identification process and how we can utilize the process to increase the success of treatment outcomes. Furthermore, the increase in the amount of bilingual/bicultural professionals will increase the utilization level of outpatient services for minority clients.

At the same time, as management becomes responsive to cultural and ethnic differences, productivity and morale will improve. The cultural synergy will enhance employee interactions through more accurate understanding and will increase the capabilities of staff, as they develop more effective negotiation skills. Consequently, the systems approach will enable the cross-cultural competent manager to improve the communication and innovation skills necessary to manage a diverse workforce and to provide more effective mental health services.

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